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ABSTRACT

This second volume of a sourcebook is a collection of 46 examples of innovative practices colleges and technical institutes are using to impart the seven domains of career preparation described in volume I. A table of contents in chart format provides this information: page, identification (model and description, college), academic level (transfer eligible, associate degree only, remedial/developmental, English as a Second Language/vocational English as a Second Language), and domains assessed (job specific, academic foundation, generic technical, utilizing systems, career exploration, work organization, education for citizenship). The last four examples are not curricular but organizational schemes to encourage faculty knowledge and administrative skills, so they do not have academic or domain designation. Each sample includes the following information: domain(s) of career preparation addressed, model of integrating academic study and career preparation, strategy, college (name and state), and contact person. In addition, each sample includes several of the following: career preparation innovation (capsule overview of a particular innovation adopted by the college); description (part of the course outline or a description of the innovative professional development or administrative arrangement); sample learning activities or student evaluation methods; topics, texts, course content, competencies, instructor comments; and program objectives and/or activities. (YLB)

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National Center for Research in
Vocational Education

University of California, Berkeley

# A SOURCEBOOK FOR RESHAPING THE COMMUNITY COLLEGE: CURRICULUM INTEGRATION AND THE MULTIPLE DOMAINS OF CAREER PREPARATION

## VOLUME II: SAMPLES OF CAREER PREPARATION INNOVATIONS

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# A SOURCEBOOK FOR RESHAPING THE COMMUNITY COLLEGE: CURRICULUM INTEGRATION AND THE MULTIPLE DOMAINS OF CAREER PREPARATION

## Volume II: Samples of Career Preparation Innovations

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| Pg. | Identification | | Academic Level | | | | Domains Assessed | | | | | | |
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| | Model and Description | College | Transfer Eligible | Associate Degree Only | Remedial/ Developmental | ESL/ VESL | Job Specific | Academic Foundation | Generic Technical | Utilizing Systems | Career Exploration | Work Organization | Education for Citizenship |
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| 93 | Linked: Accounting and philosophy | San Diego, CA | x | | | | x | | x | | | | x |
| 95 | Linked: Psychology and Business | Allan Hancock, CA | x | | | | x | | | | | | x |
| 97 | Administrative leadership plan | Macomb, MI | | | | | | | | | | | |
| 100 | Faculty leadership for innovation (System Fellows) | New Hampshire Technical Institute | | | | | | | | | | | |
| 102 | Educator-in-the-Workplace | Pasco Hernando, FL | | | | | | | | | | | |
| 105 | Educator-in-the-Workplace (University Extension) | University of California at San Diego | | | | | | | | | | | |
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# INTRODUCTION:
# SAMPLES OF INNOVATIONS IN CAREER PREPARATION

In Volume 1 we identified seven Domains, or types of knowledge and skills, that encompass both the demands of employers and the needs of community college students attempting to meet educational and employment goals. We also briefly described innovative ways in which colleges and technical institutes are imparting these competencies, based on our research of a random sample of one-third of public, two year postsecondary institutions (see "Sources of Information," Appendix, Volume I). We observed, however, that integrating career preparation into *all* components of the community college is such a novel approach that faculty and administrators often have difficulty imagining how this might be accomplished. And so, in this Volume, we have gathered actual samples of course outlines, case studies and other learning activities, project/authentic assessment methods, and organizational arrangements to clarify how large and small, urban and rural colleges have integrated academic and career preparation.

Instructors and administrators have shared outstanding documents with us, and selecting, formatting, and editing them has presented challenges. In attempting to create useful, yet succinct information, we have taken liberties with the length and arrangement of the materials incorporated in Volume II of the Sourcebook. We have tried hard to maintain the aspects which offer the greatest guidance to colleges wishing to adapt novel practices for the benefit of their own students. Even so, it was not possible to include *every* worthwhile example we discuss in Volume I, so at the end of Volume II we have added a directory of names to contact for additional information. However, it is our strong determination to not besiege innovative faculty and campuses described in this monograph with requests for information that are essentially included in this publication; we believe these examples should be adequate to spark ideas for local programs.

We caution against the wholesale adoption of any course or approach—community colleges are local institutions, and need to respond to local conditions and environments. We offer the descriptions included in Volume I and the samples of Volume II as a creative springboard for other two year colleges to envision the possibilities that can occur at a local site.

## Directions for Using Volumes I and II

### Table of Contents

The Table of Contents for Volume II allows the reader to identify the Model and Description (described on pp. 12-16 of Volume I); the college from which this example was taken; and the Domains Assessed (described in the section entitled, "The Domains of Career Preparation," on pp. 4-11 of Volume I). To make cross-referencing Volumes I and II simple, we noted which innovations in Volume I are accompanied by a sample in Volume II **[II–1]** and which ones have only a name for further contact to gain descriptions *beyond* what is included in Volume I **[N]**. (These names are listed on pages 107-109 of Volume II.) Although we have separated "transfer" and "Associate degree" courses, the two are often quite similar in skill outcomes. The distinction occurs in the title of the course, academic background of the instructor, or in the way the course is structured. We suggest that readers consider "transfer-eligible" and "Associate-level" strategies together because of this substantial overlap. Note that the last four examples are not curricular, but, rather, are organizational schemes to encourage faculty knowledge and administrative skills, so they do not have Academic or Domain designation.

All of these samples depend upon learner-centered, active teaching and learning pedagogy. No curricular innovation can overcome didactic, lecture-oriented instruction.

### Samples

Each sample has the following classifications at the top of the page:

- Domain—which Domain(s) of Career Preparation are addressed; the final four samples describe administrative arrangements (pp. 97-101) and activities for faculty to learn about skills required in the workplace (pp. 102-105), so these four pages do not have a Domain or Model designation
- Model—which model of integrating academic study and career preparation was implemented[1]

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[1] Readers who are familiar with the Models of Postsecondary Integration published by Grubb and Kraskouskas (1992) will note that the earlier models are encompassed in this current description, and that others are added. It is not the intention in this monograph, nor was it in the earlier one, to settle on an absolute number of models. Knowledge and practice of how community colleges might address the learning needs of students as well as the demands of employers is continually evolving.

- Strategy—whether this learning activity or arrangement was planned and delivered independently by a single instructor or jointly by a group or team of faculty
- College—name and state
- Contact person—if additional information is necessary

In addition, each sample includes several of the following:

- Career Preparation Innovation—a capsule overview of a particular innovation adopted by this college
- Description—part of the course outline, usually taken verbatim from materials supplied by the college or instructor so there is considerable variety, OR a description of the innovative professional development or administrative arrangement
- Sample Learning Activities or Student Evaluation Methods—unique assignments that guide the student in making connections between what is learned in school and how it will be used in everyday practice
- Topics; Texts; Course Content; Competencies; Instructor Comments—appropriate to explaining about the course or the instructor's concerns about the course materials
- Program Objectives and/or Activities—the goals and activities by which the college implemented professional development or administrative arrangements

As we stated in the "Introduction" to Volume I, there is always a danger in describing and providing examples of exemplary practices, for all of the reasons listed there. Given this caveat, we trust these samples illustrate possibilities for career preparation that is truly multidimensional and from which colleges might design effective, innovative, and flexible learning experiences for all students.

| | |
|---|---|
| **DOMAIN:** | Foundation Academics |
| **MODEL:** | Infusion (academic skills infused into occupational courses) |
| **STRATEGY:** | Joint faculty planning and delivery |
| **COLLEGE:** | Colby Community College, Kansas |
| **CONTACT:** | English, Deborah Bickner (913/462-3984, ext. 300)<br>Business, Mary Ann Wilson (913/462-3984, ext. 299) |

## Career Preparation Innovation

Academic skills (composition) are infused into occupational courses requiring specialized writing.

## DESCRIPTION

The purpose of the integration activity implemented at Colby Community College was to help business students use correct summarizing skills when doing abstracts for their classes. Business Department faculty reported that students were plagiarizing and often using poor grammar and writing skills. *Even though students received instruction and practice in their Comp I classes (a required course of all business students), they were not transferring this know-how to other class situations.* [emphasis added]

A meeting of the Business and English Department faculties was scheduled during the summer. This meeting allowed both departments to express what was currently being taught in classes, when various instruction was given or needed, and the expected student outcomes. At the conclusion of this meeting, it was determined that students in Introduction to Business and Business Law would receive specific instruction in writing summary and analysis papers. Individual faculty from both departments met to develop specific presentations and handouts to help students prepare more accurate and professional business abstracts.

## SAMPLE LEARNING ACTIVITIES

- Pretest measurement: During the first week of school, an article was assigned to be summarized.
- During week two, a photocopy of an article from *Business Week* was given to students. Students were instructed to write a summary and analysis to bring to class

the day of the presentation. The readability level of this article was estimated to be about 11th grade.

- During week three, a joint instructional session was offered by the Business and English Departments. It included an introduction of goals, definition of plagiarism, and steps in developing a summary. Four summaries were presented, with students ranking these samples from good to poor. None of the examples were excellent. Students were asked to participate in discussing the good and poor points of each example. Students were then assigned to rewrite their summaries to practice what they had learned from the presentation and bring it to the next class period. Also students were required to complete a self-evaluation form on the presentation to help in the evaluation of the process. Both summaries were evaluated by the English Department.
- Several additional articles were assigned during the semester. Students were reminded of summarizing skills by the Business instructor.
- The last article of the semester was evaluated as a posttest.

| | |
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| **DOMAIN:** | Job Specific/Foundation Academics/Generic Technical |
| **MODEL:** | Hybrid course |
| **STRATEGY:** | Independent planning and delivery |
| **COLLEGE:** | Merritt College, California |
| **CONTACT:** | Wendy Weiner (510/547-1937; e-mail: wenww@slip.net) |

### Career Preparation Innovation

English 1A, a transfer eligible course, was adapted to interest students entering the health field. Readings and discussion were centered around issues in the health sciences. Although students were not required to be enrolled in an Allied Health program, health care reform provided an occupational context for writing practice for any student.

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## DESCRIPTION (COURSE OUTLINE)

### English 1A: Reading and Composition with the Macintosh: Emphasis on Health Issues

Besides serving as a course in reading and composition, this English 1A course incorporates the word processing course to enable students to use the Macintosh as a writing tool. Students who cannot type have typing instructional software available, as well as tutoring in a Writing Lab.

### Working Syllabus

- **Weeks 1-4:** The first two essays are based on personal experience to get writing flowing

  Diagnostic (writing sample) Writing as a Process—Audience (Writing as reading)—What an essay is and does—Focusing an essay around a purpose—Paragraph

  Macintosh: Orientation, fundamentals of Microsoft Word

  Lessons: From purpose to thesis, showing, not telling; being specific

  Style work: Run-together sentences, appositives
- **Weeks 5-6:** Overview of the Health Care Crisis—What has created it? Contributed to it? Essay #3—Analysis essay, "The Components of the Health Care System"

  Style work: appositives reinforced, verbal phrases

- **Weeks 7-10:** Health Care Reform—How shall it be reformed?
  Essay #4—Comparison/contrast essay, "Which Plan Is Best?"
  Style work: Subordinators, concessions
- **Weeks 11-12:** Discussion of recent state ballot results
  Essay #5—How will health care reform affect my profession?
  Style work: depending on student needs; parallelism
- **Weeks 13-18:** Students will form groups exploring different aspects of Health Science, which will be presented to the class. Some of the areas may be Alternative Medicine; Ethics in Biomedical Research; Fetal Tissue Research; Reproductive Technologies; Genetic Engineering; Death and Dying; Euthanasia

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## SAMPLE LEARNING ACTIVITY (IN-CLASS WRITING ASSIGNMENT)

In last week's debate, the proponents' thesis for physician-assisted suicide stressed the need for self-determination and control over one's life, while the opponents' thesis emphasized the need for protection of patients. The larger issue, then, inferred and agreed upon by both sides, is CONTROL. What is your stance on the issue of control in regard to physician-assisted suicide? Make sure you back up your thesis with supporting details, as well as address the concerns of the other side. Ask yourself questions: Who should be in control? When? Why? How? Make sure to address opposing viewpoints. Try to lessen concerns. Concessions work well here. Include at least two concessions, labeled in the margin. Include at least two quotes and two paraphrases, cited correctly.

**DOMAIN:** Foundation Academics
**MODEL:** Hybrid course
**STRATEGY:** Independent faculty design and delivery
**COLLEGE:** Volunteer State Community College, Tennessee
**CONTACT:** Dan Jewell (615/452-8600)

### Career Preparation Innovation

In addition to rhetoric and composition-based English options, this college adapted a transfer-eligible composition course to emphasize work-related applications.

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## DESCRIPTION (COURSE OUTLINE)

### English 101: Workplace Based English

The purpose of this course is to study and practice the types of writing commonly found in the workplace and in academic writing, including the analysis of essays and other works of fiction and nonfiction. Emphasis is on the syntheses of ideas, methods of organization and development, the writing process, and documentation.

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## SAMPLE LEARNING ACTIVITIES

- After reading the handout entitled *The Case of the Willful Whistle-Blower*, write an essay in which you consider one of the following questions from each of the ethical approaches described in the *Introduction to Ethical Reasoning*. That is, consider it from the utilitarian approach, the deontological approach, and the human nature ethics approach.

  Questions (choose one):

  1. Should Jim have "blown the whistle" at all?
  2. Should Ken and the other engineers have informed their customers about the defect in the design of the Radon II fifteen years ago when the defect was first discovered?
  3. Should Bob have been more supportive of Jim's effort to blow the whistle even if it meant there would be a certain amount of strife at work as a result?

  Your job is to choose one of the questions above, analyze it according to the principles of the three ethical approaches and come to some conclusions about what

Jim, Ken or Bob should have done. Naturally, the conclusion you come to may be different for each of the three approaches.

Specifically, you need to display a basic understanding of the three approaches and show that you can apply that understanding to a specific situation. Technically, you need to be able to make a general statement and then support it with reasons of your own and from your reading. You also need to be able to integrate ideas and quotes from other sources into your own writing effectively and correctly.

- Define "intelligence."
    - Work in pairs or in groups of three, and use at least five sources for your information.
    - Not all of your sources need to be traditional (i.e., from the library), but some of them should be. (You must use at least one book, one magazine, and one professional journal.)
    - Make sure that your essay includes more than one definition of intelligence.
    - Choose a definition and support your choice.
    - The maximum length is six pages; the minimum is four.

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|---|---|
| **DOMAIN:** | Foundation Academics/Generic Technical |
| **MODEL:** | Hybrid course |
| **STRATEGY:** | Independent design and delivery |
| **COLLEGE:** | San Jacinto Community College, Texas |
| **CONTACT:** | Beryl McKinnerney or Karen Hattaway (713/998-6182) |

### Career Preparation Innovation

Connecting literature, electronic research, and word processing templates, this course provides a technological and social context for Composition.

## DESCRIPTION (COURSE OUTLINE)

### Introduction to Literature: The Literature Connection

Many students who enroll in English classes doubt the practicality of the study of short stories, plays, and poems. In order to connect the reading and discussing of works of literature to everyday life, the study of two short stories by Faulkner was expanded by using the Internet and writing memoranda and news articles for specific audiences.

## SAMPLE LEARNING ACTIVITIES

- Analyze:
  (1) For "Barn Burning": Abner Snopes's negative influence on his family: its causes; its manifestations; its results
  (2) For "Rose for Emily": The community's unhealthy attitudes toward its past cause it to act in ways that contradict its progress
- Think about the story in a different way by developing a brief "newspaper." The newspaper will include a description of at least one event in the story as if it were a news story in the morning paper; an editorial about an attitude or behavior of a main character; a "job wanted" advertisement relevant to the story; a "job available" advertisement relevant to the story; *and* a letter to the editor about an issue you addressed in your theme. To create the newspaper, you'll become familiar with the newsletter template feature of Microsoft Word, and you'll create the newspaper in this format.
- Use Internet connections and sites to discover information about one of the following, depending on the story you selected:

(1) Unhealthy community attitudes that slow down community progress (or the reverse—characteristics of healthy, growing communities)

(2) Ways families can overcome the unhealthy influence of one parent on children and spouse.

- Using information from the story, ideas from the story, and information from the Internet and print resources (if needed), prepare a memorandum:

(1) For "Barn Burning," write a memorandum as if you are a Child Protective Services investigator recommending whether or not Abner should be barred from contact with Sarty. (We will assume Abner survived the de Spain fire.) You'll use the information you have about negative parental influence as a theoretical basis for your recommendation, and you'll support your stance by information regarding the relationship of father and son provided in the story.

(2) For "Rose for Emily," write a memorandum as if you were the new city planner who has been employed to assist the community of Jefferson to develop its economy. Use information from the Internet as your theoretical basis for a discussion of how successful communities develop economically. Use information about the community's relationship with Emily Grierson as data for your analysis of Jefferson's present situation, then make two recommendations to the city council.

- Conclusion: After completing this project, you will be experienced in connecting information from many kinds of sources, using this information in several ways, and coming to conclusions. These are all workplace competencies that corporations and businesses demand of college graduates. You will have "connected" the classroom to the world beyond the campus.

**DOMAIN:** Foundation Academics
**MODEL:** Hybrid course
**STRATEGY:** Independent faculty planning and delivery
**COLLEGE:** Broome Community College, New York
**CONTACT:** Roberta Williams (607/778-5363)

## Career Preparation Innovation

This transfer-eligible literature course blends literary analysis with social, historical, and political perspectives of work.

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## DESCRIPTION (COURSE OUTLINE)

### English 270W: 20th Century North American Working-Class Literature

Using a variety of texts in which 20th century North American writers from working-class backgrounds have explored various themes related to working-class life, this course addresses broad thematic issues: how work helps to shape values and identity, how work affects human relationships and family life, how work determines or influences people's experiences of nature, how work enables people to act upon their environment, how work constrains people, and how work frees people. In addition, students discuss the circumstances in which some of the texts were written, the writers' reasons for creating the texts, and the purposes for which the texts have been used.

### Texts

***Short Stories:***

Hughes, Langston, *Something in Common and Other Stories*
Pancake, Breece D'J, *The Stories of Breece D'J Pancake*
Soto, Pedro, *Juan Spiks*
Yezierska, Anzia, *Hungry Hearts and Other Stories*

***Novels:***

Cisneros, Sandra, *The House on Mango Street*
DiDonato, Pietro, *Christ in Concrete*
Naylor, Gloria, *The Women of Brewster Place*

***Poetry:***

Llewellyn, Chris, *Fragments from the Fire*

Wayman, Tom (Ed.), *Going for Coffee*

***Anthology:***

Zandy, Janet, *Calling Home: Working-Class Women's Writings*

***Critical Theory:***

Wayman, Tom, *Inside Job*

***Companion Piece:***

Selections from the Folkways album "A Vision Shared"

**Primary Objectives**

- To expose the student to a broad range of texts by 20th century North American working-class writers; to deepen the student's appreciation of working-class writing.
- To aid the student in building upon techniques of literary analysis acquired in Lit. 200.
- To provide a sociopolitical context for some of the texts.
- To facilitate a lively exchange about the creation and uses of working-class writing.
- To enhance the student's appreciation of writing as a process of exploration.
- To encourage and assist students who want to create working-class writing.

## SAMPLE LEARNING ACTIVITY

For the midterm project, the student will write one of the following: (1) an analysis paper about any of the texts assigned for the course; (2) a text exploring a working-class theme: short story, scene for a play, chapter for a novel, or collection of poems; (3) an oral history project based upon an interview of a retired worker—the student will ask the worker how her or his work helped to shape the worker's life and identity and how the work enabled the worker to act upon her or his environment.

| | |
|---|---|
| **DOMAIN:** | Foundation Academics |
| **MODEL:** | Linked English and Business |
| **STRATEGY:** | Joint planning and delivery |
| **COLLEGE:** | Monroe Community College, New York |
| **CONTACT:** | Jeff Bartkovich (716/292-2189) |

### Career Preparation Innovation

Economic concepts and literary analysis were blended in this combination of English 107 (Literature) and Business 107, titled Money in Literature.

## DESCRIPTION (COURSE OUTLINE)

Money is important in fiction because it is at the source of the most important fiction of our lives. This course concentrates on literature in which money helps define character or shape values. The goals of the course are to explore the human dimension of economic behavior; to understand some of the economic aspects of our lives; to study society's economic value formation; and to analyze how literature illustrates these processes.

### Texts

Clavell, James, *King Rat*
Fitzgerald, F. Scott, *Stories of F. Scott Fitzgerald* (Scribners)
Hailey, Elizabeth Forsythe, *A Woman of Independent Means*
Hesse, Hermann, *Siddhartha*
Rand, Ayn, *Atlas Shrugged*

## SAMPLE LEARNING ACTIVITIES

### Suggested Topics for *King Rat*

- What are the major business deals transacted at Changi (tobacco, lighter, Omega watch, pen, the diamond)? Who are the characters involved in each deal? What business strategies do they use? How does each transaction reveal something about the characters? What, specifically, is revealed (i.e., their values, taste, business "schmartz," knowledge of human psychology, sensitivity, and so on)?
- Who are the important minor characters in this novel? What is their significance or contribution to the story?

- Define the relationship between King and Marlowe, between King and Grey, and between Grey and Marlowe.
- What is the significance of the "weights" incident?
- What is the significance of the "business vs. writing" discussion?
- This novel presents many statements, through a variety of different characters, about ethics, morals, standards, and ideas about right and wrong. What can you infer about the author's position concerning right and wrong? How would you support your position?
- What are the central conflicts in the story? Are they physical? emotional? intellectual? moral?
- Other topics and ideas for discussion: money, Japanese cultural attitudes, friendship, survival, and business and trading procedures

| | |
|---|---|
| **DOMAIN:** | Foundation Academics |
| **MODEL:** | Linked courses |
| **STRATEGY:** | Joint faculty planning and delivery |
| **COLLEGE:** | Peninsula Community College, Washington |
| **CONTACT:** | Grace LaFerney (360/452-9277, ext. 248) |

### Career Preparation Innovation

This section of a transfer-eligible Composition course is linked to a Criminal Justice course. This course was developed by two faculty members who chose to collaborate, even though the first semester of English (English 111) is not linked.

## DESCRIPTION (COURSE OUTLINE)

### English 112: Link with Criminal Justice Program

English 112 assumes an understanding of concepts introduced in English 111: reading of poems, short stories, plays, and essays, followed by writing in critical and analytical ways, including one or more researched papers. This section of 112 is linked with the Criminal Justice Program. Focus is on topics, fictional and non-fictional, that deal with the area of criminal justice.

## SAMPLE LEARNING ACTIVITIES

### Research Possibilities

- Drug use by pregnant women: What can or should be done to these women? Rights of the unborn? Effects on the children? Crime or choice of mother?
- Lizzy Borden trial: publicity similar to O. J. Simpson case. Differences in advancement of criminology, suppression of evidence, and so on
- *Pelican Brief*: legal issues, FBI - leak?, dishonesty of governmental officials
- James Baldwin's "Sonny's Blues": juvenile delinquency; influence in our society on juveniles and crime; compare the 1950s to the current year
- Motives of abused women who murder husbands (*Trifles*)
- Criminal justice topic: Criminal justice topic focused on personal interest in a particular area such as an interview-based paper on programs available for juvenile offenders in Clallam County. This could be an assignment from another Criminal Justice course, with that instructor's permission.

### *To Kill a Mockingbird*

Write a 4-5 page typed paper using a focused topic from the novel *To Kill a Mockingbird.* Use quotations and/or examples from the text to support your points.

**Suggestions**

- Describe the character of Atticus Finch. He is a famous American hero; explain why he is seen this way. Give specific examples from the story to show his various qualities: courage, patience, tolerance, humor, and so on. What kind of a lawyer, citizen, friend, father is he? Explain the code he seems to live by.
- Heck Tate: Describe the picture of the lawman that he represents. How does he disprove the stereotype of the bigoted, Southern sheriff? Does he bend the law, or can you find technical arguments to justify his decision and behavior near the end of the story?
- Give an overview of the criminal justice system as presented in the book (in the South in the 1930s): the judge, jury, penalty, prison system as represented.
- Focus on the trial and the crime of rape: the witnesses, the truth, charges by women against men (in this case, a white woman against a black man); have things changed now?

**DOMAIN:** Foundation Academics
**MODEL:** Infusion
**STRATEGY:** Faculty teams design "Quality Integration Activity Guides"
**COLLEGE:** Fayetteville Technical Community College, Arkansas
**CONTACT:** Steve Wagonners (910/678-8400)

### Career Preparation Innovation

Crossdisciplinary teams of faculty designed a collection of learning modules in which academic skills are infused/reinforced through occupational contexts.

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## DESCRIPTION AND SAMPLES OF INTEGRATED LEARNING ACTIVITIES

- **Provide technical content for English composition exercise (Daphne Williams)**

  Students in an English class were shown a video titled "Smoking Cessation: Prescribing Good Oral Health." As the students watched the video, they took notes on how dental professionals can assist patients in attempting to quit smoking. Afterwards, they were grouped and used their notes to write process papers of the steps they heard (and saw) on the video. In this fifty-minute lesson, students saw the integration of a program area (dental) in an academic course (English Composition) and how they both relate to the job market.

- **Incorporate writing skills into a unit on respiratory diseases (Daphne Williams)**

  After studying six diseases (chronic bronchitis, asthma, emphysema, bronchitis, AIDS, and pulmonary edema) students wrote essays comparing and contrasting the diseases. Their answers were graded using a writing rubric (using the point value indicated in parentheses) on the following components: etiology (2 points), signs and symptoms (5 points), pathophysiology (5 points), treatment (3 points), organization (2 points), and mechanics (3 points).

- **Infused common legal applications into math (Marie Cash; Larry Sullivan)**

  1. John Smith has filed for Chapter 7 bankruptcy. In response to his petition, valid proofs of claim have been filed by unsecured creditors totaling

$126,415.00. After the secured debts and the exempt property have been removed from the estate, the Trustee has collected $35,166.00 for distribution to the unsecured creditors on a *pro rata* basis. Before such distribution occurs, the Trustee is entitled to pay himself a 5.5% commission of his collections. A-1 Supply has an unsecured claim for $22,514.00, Smith Building Supply has a claim for $3,500.00, and Melrose Plumbing has claims totaling $119.50. How much will each of the creditors recover, sharing *pro rata* with all unsecured creditors?

2. You represent a client who owns an undivided $^1/_{32nd}$ interest in the oil and gas in a tract which is under lease to Exxon Exploration Co. Exxon is entitled to $^7/_8$ of the production value from the lease, and the remaining $^1/_8$ belongs to the mineral owners according to their respective interests. Exxon has provided you with records showing the production for the past year to have been as follows:

   a. January - $2,536.13
   b. February - $3,517.26
   c. March - $2,738.12
   d. April - $3,126.19
   e. May - $3,132.00
   f. June - $865.27
   g. July - $1,192.10
   h. August - $1,937.35
   i. September - $2,635.12
   j. October - $2,193.16
   k. November - $1,876.79
   l. December - $2,189.76

   What is your client's share of the royalty for the last year?

   On July 10th, your client's mother died, leaving her $^1/_8$ interest in the minerals to your client. What will he get for this interest?

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**DOMAIN:** Foundation Academics
**MODEL:** Infusion
**STRATEGY:** Joint planning and delivery—Team Teaching
**COLLEGE:** Illinois Central College, Illinois
**CONTACT:** Anne Norton (309/694-5163)
Ken Eckstein (Mechanical Design) and Stan Rose (Math)

### Career Preparation Innovation

Technical Calculus is integrated with applications from Mechanical Technology by adding a laboratory exercise to illustrate each major mathematical concept.

## DESCRIPTION

The lab exercises were developed jointly by instructors from engineering and math. It was an important addition to the ICC program because the majority of Mechanical Technology graduates transfer to Bradley University to pursue a bachelor's degree in Mechanical Technology, which requires three semesters of Technical Calculus. Also, approval by the Accreditation Board for Engineering and Technology (ABET) requires an introduction to Technical Calculus in the Associate degree program.

### Instructor Comments on the Course

The main strength of the course is the laboratory exercises. Several of the students have said that they do not really understand the topics until they see them used in the lab. In addition to helping in the comprehension of calculus, the labs also have another useful purpose. They help students to gain experience in such areas as modeling a real system using mathematics, solving a problem in different ways to check for accuracy, and interpreting data and graphs. Recent studies have indicated that these are the math skills that industry expects of graduates with Associate degrees.

One problem of the course is the textbook. The book is not attractive or easy to read. Another problem is the necessary use of computers and software. It is difficult to schedule the use of such equipment for three hours a week.

A distinctive feature of this course is tied to the unique attitude of technology students. Technology students are very capable of learning math skills, but will only do so if they understand how they can make money with those math skills. They show very little interest in learning math for any beauty or logic that math may offer to others. This course demonstrates a use from the technology field for each math skill presented.

## Course Content

A matching of the major subtopics and the accompanying lab exercises is given below:

| Course Subtopic | Lab Exercise | Course Subtopic | Lab Exercise |
|---|---|---|---|
| Functions | Ball Bearing Life | Higher Order Derivatives | Gear Shaper Mechanism |
| Continuous Functions | Cam Follower Curves | Newton's Method I | Simple Physics Example |
| Derivatives | Rate of Change | Newton's Method II | Simulating an Equation Solver |
| Integration | Integration Lab Data | | |
| Volumes | Volume of a Football | Maximums | Optimum Carton Design |
| Work | Engine Horsepower | Minimums | Optimum Conveyor Support |
| | | Centroids | Football Area Properties |

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**DOMAIN:** Foundation Academics/Education for Citizenship
**MODEL:** Infusion
**STRATEGY:** Independent faculty
**COLLEGE:** Illinois Central Community College, Illinois
**CONTACT:** Anne Norton or Jan David (309/694-5163)

**Career Preparation Innovation**

Historical document, visuals, and statistics are infused into a Communications course.

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## DESCRIPTION

The use of primary documents from the post-World War II era offers a historical perspective on students' employment-related concerns.

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## SAMPLE LEARNING ACTIVITIES

### Archival Document: World War II Letter

The United States fought World War II on the homefront as well as overseas, and working women contributed significantly to the success of the war effort. Even before Pearl Harbor, the war in Europe spurred production in the United States. At first, men took the new positions, but by mid-1942, as more and more men left the workforce to join the armed services, government and industry recognized womanpower as an untapped national resource. Publicity campaigns orchestrated by the War Manpower Commission and the Office of War Information fostered this change, while the mass media glamorized women working in war jobs and praised them for their patriotism. Between 1940 and 1945 the number of women in the workforce increased by 50%.

Just as the government was responsible for the unprecedented mobilization of women during the war years, it led the return, through its postwar policies, to the old status quo. Although women in higher paying industrial jobs often preferred to remain at work after the war, they were expected to give up their war jobs for more traditional feminine roles. The Women's Bureau of the Department of Labor recommended that new jobs be found for them, but by the end of 1945, industry had dismissed one in four working women. Although some women viewed their World War II experience as an opportunity to attain permanent equality in the workplace, the attitudes toward labor and gender that had prevailed before the war reemerged largely intact.

### Analysis

- Now that the war is over, what problem has arisen for the author? Is it a personal issue? Employment-related issue? Legal issue?
- To what extent is the author's problem unique to her state or to her company?
- What resolution is sought? How does the author justify her argument?

### Research

- Women were crucial to the success of the World War II homefront drive in fields other than industry. Investigate the work done by women in spheres such as the home, service and clerical jobs, agriculture, and volunteer organizations.
- While some labor and women's historians view World War II as a turning point for women, others do not. Study William Chage's *The American Woman: Her Changing Social, Economic, and Political Roles, 1920-1970*, or Alice Kessler-Harris's *Out to Work: A History of Wage-Earning Women in the United States* and compare the arguments that you find in this document with those represented in these works.

September 6, 1945

President Truman

Dear President;

This letter is in reference to the unemployment situation on Long Island, New York. Now that the war is won and over, there are no jobs with a living wage available.

I was one of the first women to be employed by the Grumman Aircraft Engineering Corp. back in March of 1942; now I am given to understand that the Grumman Corp. will not rehire any women in their shop.

The only jobs open to women are office jobs which pay an average wage of $20.00 to $22.00 a week. I happen to be a widow with a mother and son to support and no other means of income. I pay $45.00 a month for rent exclusive of my gas and light and at the present time there is no cheaper place to rent on Long Island.

This being the conditions, I am unable to manage on a $22.00 a week salary.

My reason for writing to you is not for pity, but I would like to know why, after serving a company in good faith for almost $3\frac{1}{2}$ years, is it now impossible to obtain employment with them. I am a lathe hand and was classified as skilled labor, but simply because I happen to be a woman I am not wanted.

Won't you kindly look into these matters and see that the women who are considered the head of a family get as much of an even break as the men.

Sincerely yours,
Ottilie Juliet Gattuso
30 Shepherd Ave.,
Lynbrook, New York

Reproduced from the holdings of the National Archives
Records of the Women's Bureau, Record Group 86

## Other Learning Activities

- Using business magazines, select recent articles that contain some type of supporting statistics. Create visual support for an oral presentation by converting the statistics to charts or graphs and then creating overhead transparencies to use in your presentation.
- Write a short report in memorandum format. Convert the statistics from your text to a pie chart to be submitted with the report.

**DOMAIN:** Foundation Academics
**MODEL:** Hybrid course
**STRATEGY:** Joint planning; independent faculty delivery
**COLLEGE:** San Francisco City College, California
**CONTACT:** Phyllis McGuire (415/550-4438)

### Career Preparation Innovation

Occupationally related content (safe food handling and nutrition) is offered in an academic department (Microbiology), explicitly connecting academic concepts with career preparation in food service. This college used a one unit course for the limited content in Sanitation Principles. Nutrition is a three unit course.

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## DESCRIPTION (COURSE OUTLINE)

### Microbiology 51: Sanitation Principles and Practices (1 credit)

Principles of buying, storing, preparing, and serving food to ensure the safety of the food for human consumption; the importance and practice of sanitary habits by food service personnel; causes of food poisoning and food spoilage; the principles and practices of public health and food service managerial procedures to ensure sanitary food for the public; and public health laws are studied in this course.

After completing this course, the student will be able to

- Recognize the causes and symptoms of the major types of food poisoning.
- Distinguish between normal food microbes, spoilage organisms, and pathogens.
- Demonstrate proper hand washing.
- Recognize unsanitary personal hygiene habits.
- Identify sanitary hazards in the food environment.
- Explain the importance and reasons for established public health managerial procedures for the buying, storage, preparation, and service of food to the public.
- Demonstrate the proper sequence of techniques for dislodging food from a choking person.

### Nutrition 51: Nutrition

The focus of this course is for students to obtain a basic understanding of food and nutrients and to discuss their relationship to human health. The relationship of diet, food, and nutrients to general health, weight control, and diet-related chronic diseases is explored. Upon successful completion of Nutrition 51, the student will be able to do the following:

- Select reliable sources of nutrition information.
- Identify the essential nutrients and reliable food sources.
- Label the structures of the digestive tract and describe the function of each.
- Describe what happens to each of the following as they journey through the digestive tract: proteins, carbohydrates, fiber, lipids, and water.
- Identify the roles of various nutrients, especially those commonly associated with under- and over-nutrition in the United States and abroad.
- Discuss general diet and nutrient recommendations as they relate to optimal health and disease prevention.
- Interpret food and nutrition labels.
- Identify nutrient dense foods from a variety of ethnic cuisine.
- Analyze a recipe for its nutrient content.
- Describe how cooking and food processing affect the nutrient content of foods.
- Examine issues relevant to food safety such as pesticide use, food additives, environmental contamination, and microbial poisoning.
- Discuss the problem of weight control and evaluate products and methods designed for weight loss or gain.
- Assess his or her own nutrient needs, analyze his or her own diet, and modify diet accordingly.

**DOMAIN:** Foundation Academics
**MODEL:** Hybrid
**STRATEGY:** Joint planning; independent delivery
**COLLEGE:** Holyoke Community College, Massachusetts
**CONTACT:** Toby Tamarkin (413/538-7000); Elizabeth Tite

### Career Preparation Innovation

This course offers occupational preparation (food handling safety) in an academic department (Chemistry), and is an example of an Applied Biochemistry course.

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## DESCRIPTION (COURSE OUTLINE)

### CHM 119(D)—Introduction to Biochemistry of Food Science (4 credits – 3 lecture and 2.5 lab hours per week)

This course gives a fundamental background in biochemistry for an understanding of the nature of food products, food handling, and food preservation in order to assist in preparing students for careers in hospitality and food management. The course is designed to satisfy the needs of the Hospitality Management Transfer Option and the Hospitality Management Career Option, and to fulfill a one semester laboratory science requirement for the Arts and Science curriculum.

**Lecture Content**
Metric System
Laws of Chemical Combination; Equations
Atomic Structure; Periodic Table; Radioactivity
Chemical Bonding
Water; Solutions; Concentrations
Colloidal Systems
Acids; Bases; Salts; pH
Hydrocarbons
Aromatic Compounds
Carbohydrates
Lipids
Proteins
Vitamins
Minerals
Food Preservation
Shelf Life
Food Flavorings
Food Additives
Food Processing
Chemical Changes of Food Caused by Cooking

**Lab Content**
Check-In; Safety Procedures; Use of Mettler Balance
Transfer and Measurement of Chemicals
Studying Density Using Salad Oil and Vinegar
Specific Gravity of Potatoes
Physical and Chemical Properties
Periodic Table Relationships
Half-Life Simulation
Water Analysis
Atomic Absorption
Preparation of Aspirin
Iron in Food
Nutrient Testing Indicators and Plant Nutrients
Vitamin C in Foods; Checkout

*Laboratory leaflets by Chemical Education Resources, Inc. to be purchased at the bookstore.

**DOMAIN:** Foundation Academics/Systems
**MODEL:** Hybrid course
**STRATEGY:** Independent faculty
**COLLEGE:** Gateway Technical Community College, Connecticut
**CONTACT:** Wesley Winterbottom (203/234-3303; voice mail [vm]: 777)

### Career Preparation Innovation

Occupationally related content (Environmental Studies) is offered within the Chemistry Department, using case studies and project-based learning.

## DESCRIPTION (COURSE OUTLINE)

### Chemistry 114: Environmental Regulations

The objective of this course is to increase your knowledge of the vast number of regulations and statutes that have developed over the last two decades which make up a major part of today's environmental protection programs. Your success in the course can be assured through attending classes; completing all assigned readings, homework, the oral presentation, and the project on time; and taking an active participative role in class discussions and group case studies.[2]

## SAMPLE LEARNING ACTIVITIES
## (CASE STUDIES/COLLABORATIVE PROJECTS)

### Environmental Ethics Cooperative Learning Exercise

As one of the Executive Assistants to Governor Weicker, you have been asked to make a recommendation on a matter that was recently referred to you by the Connecticut Council on Environmental Quality. This advisory group, who are appointed to four-year terms by the Governor, has raised an important air pollution issue. The issue raised deals with the continuing lack of improvement in Connecticut's air quality despite an aggressive program being administered by the Department of Environmental Protection and the EPA, which is producing cars that run cleaner and cleaner every year.

The main reason that this is occurring is because the average number of vehicle miles being driven per capita in Connecticut continues to increase every year. Your predecessor, Governor O'Neill, embarked on a major road building and rebuilding program of Connecticut's major roads, the majority of which were built in the 1950s and 1960s and had reached the end of their useful lives. The former Governor's program has been very successful indeed. As a matter of fact, combined with the lowest mortgage rates available since the late 1960s, it has resulted in a major building boom of single family residences in areas around major cities which used to be considered rural. Examples are the towns of Hebron and Marlborough, which are a 30-45 minute commute from Hartford; the Connecticut Office of Policy and Management forecasts that their population will increase by 35% by 2005. It is this suburbanization of formerly rural areas which has led to the increased number of vehicle miles per capita being reported.

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[2] For more information about using case studies in community college instruction, see Winterbottom (1993).

As an Executive Assistant you are very familiar with the steps that would have to be taken to reduce the rate of expansion of the suburban areas of major Connecticut cities. One of the most effective is to increase the minimum lot size required to build a residential unit on from, in most instances, $^1/_2$ to one acre to five to ten acres. Such rezoning clearly places a ceiling on the number of people who will be able to live in these areas. It is, however, frequently seen as an exclusionary practice because it raises significantly the price of living in these areas based on income. Many people perceive this type of rezoning to be racially discriminating as well.

What would you recommend to Governor Weicker? As an Executive Assistant you are obligated to consider all sociopolitical and scientific factors. *Please justify your recommendation.*

**Case Study: Monopoly, New Jersey**

Since the 19th century, the New Jersey shoreline has been a summer haven for residents from New York City, New Jersey, and the eastern areas of Pennsylvania. In 1993, shoreline tourism provided half of New Jersey's $18 billion dollar tourist industry revenues. Since the 19th century the shoreline has become more and more developed, raising the possibility of ever increasing financial losses from hurricanes. This potential loss has provided an incentive for the construction of jetties and seawalls to protect shoreline property owners' investments and the economic seasonal boom to shoreline town's economies. Jetties were constructed in the 1950s and 1960s in an attempt to reduce erosion of sandy beaches caused by the lateral currents and wave action. Seawalls were constructed to protect waterfront property from the direct damage of high tides during storms and hurricanes.

Research and empirical work done in New Jersey and other shoreline communities on the eastern seaboard has clearly demonstrated that jetties and seawalls are not effective at reducing beach erosion by the ocean. In fact, it has been clearly shown that these man-made changes actually increase the amount of erosion on the leeward side of jetties and in front of seawalls because of the high velocities of reflected waves.

It has recently been suggested that a major public works project be initiated by the U.S. Army Corps of Engineers with government funds (10% local, 15% State of New Jersey, and 75% federal) to pump millions of cubic yards of sand to create new 140 feet wide beaches over a 33 mile stretch of beach. In return for this investment by the state and federal governments, Northern New Jersey shoreline municipalities would have to agree to expand public access to privately owned beaches—a tough task given the dearth and expense of available oceanfront property and property near the water that could be used for parking lots as well as the resistance of private property owners.

The project is proposed to be done in three phases. Preliminary financial information for Phase I, which includes the 12 miles of the northernmost beaches, is as follows:

- Section 1 Length - 12 miles
- Engineering Studies and Management Overhead - $50 million
- Sand Replenishment - $89 million per mile
- Replenishment as needed over a 50-year period - $81 million per mile

While exact figures for Phases II and III, which together include the next 21 miles of beaches to the south, are not available, estimates indicate that if this additional beach rebuilding is undertaken during the first decade of the next century, the cost of initial replenishment is $120 million per mile with the cost of maintenance replenishment as needed over the next five decades projected to be $91 million per mile.

You have been appointed by Governor Christine Todd Whitman of New Jersey to her "White Paper" Commission whose charge is to develop a report to the Governor and the Legislature proposing strategies for the future of New Jersey's oceanfront communities. You are aware that last year, a similar commission appointed by New York's Governor Mario Cuomo suggested as one of their strategies that no governmental funds be used to protect anything other than government-owned properties—if adopted, this strategy would literally abandon 100 homeowners in West Hampton, Long Island, without any way to reach their homes other than by water and would not provide them with any protection against future storm losses.

Governor Cuomo's Commission also recommended that government-subsidized hurricane insurance not continue to be available to owners of structures severely damaged by the 1992 hurricane (i.e., their existing losses would be covered—so they could essentially walk away with a cash payment which would cover their outstanding mortgages with money left over to build a second home somewhere else). Even though the New York State Commission released their recommended strategies in December 1992, no action has been taken by either Governor Cuomo or the legislature to date. As you attend the first meeting of Governor Whitman's "White Paper" Commission, you have a distinct feeling that this is a tough issue and begin to formulate the strategies you would like to see the committee adopt. Your chosen strategies are . . . because . . .

**Instructor's Note:** We are always searching for ways to improve these case studies. Please feel free to use them in your classes; written or verbal communication of feedback based on your use of this case to Wesley L. Winterbottom, Coordinator, Environmental Toxics & Science Program, Gateway Technical Community College, 88 Bassett Road, North Haven, CT 06473, 203/234-3303 (vm 777) will be very much appreciated.

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|---|---|
| **DOMAIN:** | Foundation Academics |
| **MODEL:** | Hybrid course |
| **STRATEGY:** | Independent design and delivery |
| **COLLEGE:** | Alaska Vo-Tech Center, Alaska |
| **CONTACT:** | Mark Ganser (907/224-3322) |

### Career Preparation Innovation

As a Vocational-Technical Center, all programs are geared toward "Hire Education"—academic competencies are embedded in occupational preparation. In this case, mathematics are incorporated into culinary arts.

## DESCRIPTION

### Math for Baking (Certificate Program)

This course is designed to teach the math required for Baking, and asks students to learn math skills in the way they will be used at the work site.

## SAMPLE LEARNING ACTIVITIES

- Given the soft roll formula #99, how many dozen two ounce rolls will it yield? How may the last press, which is shot weight, be practically handled on the bench?
- A baker receives an order for 36 dozen 2 ounce dinner rolls. How much dough using #96 will be required?
- A baker receives a mid-production change order at 2:30 a.m. He has scheduled a Soft Rolls dough to produce 26 dozen 2 ounce rolls. How many 4 ounce French Deli rolls can he produce from the same dough?
- A baker is running #108 and wishes to scale his loaves at 12 ounces each. How many loaves can be produced from a single dough without calculating a production loss?
- A baker is using formula #139 Almond-Cherry Filling, and makes up a half-batch. Using $^3/_4$ ounce per roll, how many dozen rolls can be produced?
- What would the shortening scaling amount and new percentage be if a baker increased the shortening amount in cake formula #11 French Apple by 10%? What improvements could be expected?

- The cinnamon rolls in a bake shop are browning too rapidly in the oven, resulting in underbaked or burnt products. What are two possible solutions?
- Given correct oven temperatures, a baker's white pan break lacks good crust color bloom. What are two good possible solutions?
- How many 10 ounce loaves of bread can be made from a 29 pound, 8 ounce dough?
- At 4 pounds, 8 ounces per press, how many dozen dinner rolls can be made from 176 pounds of dough and how much will each roll weigh?
- Given the sweet dough/coffee cake formula #110 compute the percentages for each ingredient.
- Given the formula #167 Bohemian Rye, factor the formula to 175 pounds.
- Given the formula #185, Angel Food Raised Donuts, factor the formula into two different formulas, one for 38 pounds of dough and one for 18 pounds of dough. In mixing 2 ounce and/or 4 ounce units, what are the respective yields for each new factored formula?
- A baker receives an order for 30 dozen 2.5 ounce Raised Donuts. Using formula #187, World's Fair, how much dough must be scheduled for production? Produce the necessary formula.
- Compute a formula division into $^1/_8$s using formula #17, White Bread, with 10% Rye.
- Compute a formula for #99, Soft Rolls, using 3 quarts of water with a Saf yeast conversion. This formula is suitable for a 20 quart mixer.

**DOMAIN:** Foundation Academics/Job Specific/Generic Technical
**MODEL:** Linked courses
**STRATEGY:** Joint faculty planning and delivery
**COLLEGE:** San Diego City College, California
**CONTACT:** Barbara Hansen, Small Business Management (619/230-2661)
Barbara Riva, Business Communications (619/230-2664)

### Career Preparation Innovation

Communications and Small Business Management courses are linked, allowing students to investigate the start-up requirements of a small business. A joint course assignment sheet illustrates how most assignments meet requirements in both courses.

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## DESCRIPTION

### Small Business Management/Business Communications

In Business 155 (Small Business Management), students learn how to write a business plan. This is an extensive document which describes their market analysis, target customers, competitive assessment, marketing plan, location, and management team. They develop financial projections including the income statement, balance sheet, and cash flow. They support all their decisions with documents in the appendix.

We have found that writing a business plan during a 16-week semester is a formidable task for our students. The research alone is overwhelming. (Many small businesspeople take several years to develop a complete document.) We have also observed their difficulty with oral communication. This skill is important when dealing with potential clients, funding sources, and community networks.

Business Communications teaches students how to communicate in the business world. They develop the ability to analyze, organize, and compose various types of written and oral business communications. They learn to write an effective business letter, a professional business report, and do a business presentation. They are trained in the appropriate style, format, and content of these documents.

Blocking Small Business Management and Business Communications offers advantages for students in both classes. From the perspective of the Business Communications class, students immediately see the application of their skills in an applied business setting. The Small Business Management students have the training and support from a business communication professional who will help them produce a professional document and learn to communicate effectively with resources.

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## SAMPLE LEARNING ACTIVITIES

- **Small Business Owner/Operator Interview**

  Interview a small business owner. This may be someone you already know or do business with. It will be most interesting if this is someone who is in a business you would consider owning. Small business owners are busy people, but they will be flattered that you are interested in them and in small business in general. You should focus your questions on how they began their business. Some things you might like to know would be, Why did you start this business? What formal planning did you do before you started? In hindsight, were you well-prepared to start this business? In what areas were you best prepared? In what areas were you underprepared? Did you have enough money? Where did you get your start-up capital? What help or advice did you get? How did you find these advisors? What was your first year like? What would you do differently in planning to open this business? What trade associations do you belong to? How do these help you? What trade publications do you read? and How do these help you?

- **Trade Association Project**

  1. Identify your business.
  2. Determine your SIC Code.
  3. Identify what business you're really in.
  4. In the library, use the *Encyclopedia of Associations* to find as many trade associations as you can that are related to your business.
  5. In the library, use the *Gale Directory of Publications* (or other appropriate directory) to find trade journals related to your business and industry.

- **Assignments**

  As the following chart indicates, you will receive two grades on most assignments. These grades will be based on the appropriate criteria for each class.

| SMALL BUSINESS MANAGEMENT | | BUSINESS COMMUNICATIONS | |
|---|---|---|---|
| **ASSIGNMENT** | **POINT VALUE** | **ASSIGNMENT** | **POINT VALUE** |
| Interview Small Business Owner | 100 | Short Report<br>Letter | 50<br>50 |
| Letter to Trade Association | 50 | Letter | 50 |
| Letter to Media | 50 | Letter | 50 |
| Competitive Analysis | 75 | Short Report | 75 |
| Location Analysis | 75 | Short Report | 75 |
| Promotional Plan | 50 | | |
| | | Sales Letter | 50 |
| Financials – Income Statement Cash Flow | 50 | | |
| | | Two in-class letters (tests) @ 25 points each | 50 |
| Business Plan Presentation | 100 | Oral Report | 100 |
| Business Plan | 250 | Business Plan | 250 |
| 5 Essay Tests | 200* | 5 Essay Tests | 200* |
| **TOTAL POINTS** | **1,000** | **TOTAL POINTS** | **1,000** |

*Tests will be worth 50 points (in each class) and will cover textbook and class discussion. The lowest grade will be dropped. THERE WILL BE NO MAKE-UPS.

| | |
|---|---|
| **DOMAIN:** | Foundation Academics/Generic Technical |
| **MODEL:** | Linked courses |
| **STRATEGY:** | Joint planning; independent delivery |
| **COLLEGE:** | Vista Community College, California |
| **CONTACT:** | Maureen Duncan (510/522-8318) |

## Career Preparation Innovation

The Communication Arts and Information Technologies cluster utilizes an interdisciplinary approach, combining computer skills with the practical writing composition and visual design needed to put those skills to effective use.

### DESCRIPTION (COURSE OUTLINES)

| | | |
|---|---|---|
| **The Computer in Communication**<br>Business - 1.5 units (Class meets 3 hours per week for 8 weeks) | Computing to Write<br>Computing to Illustrate<br>Computing to Research<br>Telecommunications and the Internet | A survey of the major computer programs used in mainstream business communications. Demonstrations of programs ranging from word processors, desktop publishing, graphics, and telecommunications to the Internet and multimedia. Copyright law and other social/ethical issues are also addressed. |
| **Clear Writing**<br>English - 3 units | Styles of Writing<br>Computer Writing Tools<br>Editing & Page Design<br>Audience Analysis | Sound writing techniques are taught along with computer and visual design skills to make business writing more effective. Organization, research, presentation, and word processing exercises are used to enhance the clarity of writing for a wide variety of projects. |
| **Visual Literacy**<br>Art - 3 units (Class meets Saturdays for 3 hours) | Layout Design Principles<br>Typography<br>Creative Process<br>Using Illustration and Photographs | A survey of basic design principles that can give greater impact to many types of communications. The course presents a combination of art history, design techniques, typographic sense, use of space, and the creative design process. Practical exercises give opportunities to experiment with design ideas. |
| **Integrated Computer Expertise**<br>Business - 1.5 units (Class meets 3 hours per week for 8 weeks) | The Tao of Computing<br>File Exchange between Mac and PC<br>Making Programs Work Together<br>Both Mac and Windows Platforms | Also known as "The Tao of Computing," this course teaches universals of running programs on both the Mac and Windows platforms. Demonstrations will show the same tasks being done on several different programs. Course topics include file import/export, style sheets, font management, printer management, and other common computing tasks. |

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**DOMAIN:** Foundation Academics/Generic Technical/Systems
**MODEL:** Linked courses
**STRATEGY:** Joint planning and delivery
**COLLEGE:** Macomb Community College, Michigan
**CONTACT:** James Jacobs or Les Beecher (810/286-2118)

### Career Preparation Innovation

After noting that Technology students often postpone taking English until just before graduation, three units of English were linked with one unit each of Machine Technology and Accounting to provide a context for composition.

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## DESCRIPTION (COURSE OUTLINE)

### Course Competencies (cognitive/application/process)

- Write for an unspecialized audience: readers who lack familiarity with the writer's field.
- Approach writing as a process: pre-writing, rewriting, editing.
- Perceive writing as showing the relationship among ideas, not merely listing ideas.
- Write a persuasive resolution to a problem.
- Write with logical organization.
- Write with improved coherence.
- Write with precision.
- Write with clarity.
- Show an awareness of the interrelationship between business and technology.
- Apply the Theory of Constraints to help solve a manufacturing problem.
- Practice problem-solving techniques using decision trees.
- Apply research techniques for solving manufacturing problems.
- Make decisions based on research.
- Practice scheduling techniques through the use of computer simulation.
- Participate in a management role that mandates research.
- Participate in a management role that mandates quantitative decisionmaking.
- Communicate with upper management, lower management, and outside vendors.

## Business Competencies

- Demonstrate the Theory of Constraints to help solve business and manufacturing problems. Performance will be satisfactory when the following occur:
    - Learner defines the desired outcome.
    - Learner describes constraints that make it difficult to achieve the goal.
    - Learner identifies viable solutions that address central difficulties posed by the constraints.
    - Learner determines which solution is likely to best overcome central difficulties posed by the constraints.
    - Learner tests the solution to see if it works.
    - Learner assesses the value of the solution.
    - Learner selects and tests additional solutions if necessary.

  Competence will be demonstrated with case studies provided by instructor.

- Illustrate problem-solving techniques using decision trees. Performance will be satisfactory when the following occur:
    - Learner identifies undesirable effects that need to be addressed.
    - Learner proposes a process that provides a core cause to the undesirable effects.
    - Learner tests the process to make sure the cause and effect relationship is present.
    - Learner revises the process if necessary.
    - Learner defends conclusion drawn from the cause and effect relationship.

  Competence will be demonstrated with learner-developed case studies.

**DOMAIN:** Foundation Academics (math)
**MODEL:** Infusion (everyday applications infused into math)
**STRATEGY:** Independent planning and delivery
**COLLEGE:** Cape Cod Community College, Massachusetts
**CONTACT:** Carol Dubay (508/362-2131) or Ted Panitz

### Career Preparation Innovation

This module is intended to answer conclusively the age-old questions, "What do I need algebra for?" and "When will I ever use algebra in real life?"

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## DESCRIPTION (COURSE OUTLINE)

**Elementary Algebra Integration Module:** Making the connection between algebra and the real world. The student will understand how a particular aspect of math is incorporated into a news article or ad; recognize a hypothesis being presented in each article; recognize how math is used to defend or establish a point of view; evaluate news articles for accuracy and presentation; describe the article's thesis in their own words in writing; draw their own conclusions; present ideas to their group and to the entire class; understand how to work with their peers to arrive at a group consensus to solve problems; increase observational and listening skills; make oral presentations to groups, large and small; understand how to work with a team to present information back to the class; understand business/advertising uses of math in various publications; and recognize when math principles are being used to make a point about business or social issues.

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## SAMPLE LEARNING ACTIVITIES

- **Reading Articles/Advertisements**
  Students will be assigned an article or advertisement which makes use of algebra to establish or explain a conclusion dealing with some aspect of the business world or society in general.
- **Analyzing a Data Table**
  Assignment: This table provides extensive information on weight and drinking. How could you determine if there is a relationship between the drinks per hour a person has and blood alcohol level?

| **Drinks per hour*** | **Blood Alcohol Level** | | | | | | | | **Likelihood of Intoxication** |
|---|---|---|---|---|---|---|---|---|---|
| **8** | .35 | .29 | .25 | .22 | .20 | .18 | .16 | .15 | **Definitely** |
| **7** | .31 | .26 | .22 | .19 | .17 | .15 | .14 | .13 | |
| **6** | .26 | .22 | .19 | .17 | .15 | .13 | .12 | .11 | |
| **5** | .22. | .18 | .16 | .14 | .12 | .11 | .10 | .09 | Possibly |
| **4** | .18 | .15 | .13 | .11 | .10 | .09 | .08 | .07 | |
| **3** | .13 | .11 | .09 | .08 | .07 | .07 | .06 | .06 | |
| **2** | .09 | .07 | .06 | .06 | .05 | .04 | .04 | .04 | **Rarely** |
| **1** | .04 | .04 | .03 | .03 | .02 | .02 | .02 | .02 | |
| | **100** | **120** | **140** | **169** | **180** | **200** | **220** | **240** | |

**Weight**

*One drink = 1 oz. 86-proof liquor; 12-oz. bottle beer; 3 oz. wine

**Other Factors that Affect Your Ability To Metabolize Alcohol**

- Use of medication, including over the counter drugs such as cold remedies
- How much and what you have eaten
- Age
- Whether you are tired
- Gender
- Health

**Sources:** Executive Office of Public Safety, Massachusetts State Police, Distilled Spirits Council of the U.S.

| | |
|---|---|
| **DOMAIN:** | Foundation Academics |
| **MODEL:** | Applied (Vocational English as a Second Language) |
| **STRATEGY:** | Jointly developed; independently delivered |
| **COLLEGE:** | City College of San Francisco, California |
| **CONTACT:** | Phyllis McGuire (415/550-4438) |

### Career Preparation Innovation

Language acquisition is offered in an occupational context (auto; health)

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## DESCRIPTION (COURSE OUTLINE)

### VESL for Automotive Technology: Course Content

A. Automobile and component area terminology
  1. Identification, pronunciation, and spelling of names of parts of the automobile
  2. Asking and giving information about parts of the automobile

B. Safety practices
  1. Reading and communicating safety rules
  2. Recognizing and identifying unsafe working situations

C. Automotive operations
  1. Language of basic automotive tasks
    (a) Automotive trade manuals
    (b) Specification data sheets
    (c) Reference books
  2. Pronunciation and spelling of basic terms of automotive repair and maintenance
    (a) Automotive trade jargon
    (b) Abbreviations
    (c) Symbols

D. Tools and devices for measurement and calculation
  1. Language of basic mathematical and geometric calculations
  2. Numerical readings of ratios, percents, fractions, and graphs
  3. English and metric measurements
  4. Interpreting automotive specifications, charts, diagrams, and conversion tables

E. Communication with trainers, supervisors, and coworkers; development of listening and speaking skills in response to instructions in the classroom and on the job
  1. Asking for clarification
  2. Verbal or nonverbal indications of comprehension
  3. Restatement of instructions
  4. Explaining principles and practices

**VESL for Allied Health Careers: Course Content**

- Demonstrate knowledge of hospital departmental, terminology, and staff lines.
- Recognize and respond appropriately to physicians and staff's orders, requests, directions, and discussions.
- Explain medical procedures to patients and respond to patients' questions.
- Recognize and use appropriate small talk and idioms with physicians, staff, and patients.
- Evaluate and respond appropriately in nonroutine emergency situations.
- Recognize and demonstrate an awareness of cultural diversity in a medical environment.
- Make and receive calls in medical settings, with proper use of language and etiquette.
- Use assertiveness skills to get and give information needed.

| | |
|---|---|
| **DOMAIN:** | Foundation Academics |
| **MODEL:** | Applied (remediation in an occupational context) |
| **STRATEGY:** | Jointly developed; independently delivered |
| **COLLEGE:** | Chabot College/Las Positas College, California |
| **CONTACT:** | Marilyn Marquis (510/373-4909) |

### Career Preparation Innovation

Developmental level reading skills taught in occupational context (automotive). The course was offered in the shop area by an English instructor who had experience in automotive corporate training.

## DESCRIPTION (COURSE OUTLINE)

### Auto Technology 73: Reading Automotive Service Manuals (3 credits)

This course will help you make reading a tool for professional and personal development, while reading a wide range of materials such as automotive textbooks and manuals. In addition, attention is focused on improving test taking skills and making reading a comfortable skill in personal and professional life.

### Texts

Manufacturers' automotive service manuals; automotive publications

### Expected Outcomes for Students

Upon completion of the course, the student should be able to do the following:

- Read and understand a comprehensive automotive service manual.
- Read and understand a manufacturer's automotive service manual.
- Read and understand questions as presented by ASE and BAR testing certification.
- Complete a service invoice to legal requirements as per the BAR "Write it Right."
- Read journal articles and professional publications such as service bulletins.

### Course Content

Reading, test taking, note taking, and memory jogging skills

## SAMPLE LEARNING ACTIVITIES

### Motoring Through the Years (pronoun referents)

Read the following sentences and identify the reference for the words in bold.

- The oldest known self-propelled vehicle dates back to 1771 **when** the Frenchman Cugnot demonstrated **his** steam tractor.

- **This** vehicle cannot be considered an automobile in the sense **that it** was not a practical road machine.
- The first American built road vehicle **that** could be called an automobile did not appear until the mid-1890s.
- If the automobile was going to replace the horse for everyday transportation, **it** had to become more reliable and affordable.
- Ransom Olds had **these** goals in mind when **he** designed the curved-dash Oldsmobile.
- Many other makes of autos of **this** period followed the design of the Oldsmobile.
- He introduced precision machined, interchangeable parts **which** improved power.
- The four cylinder Model "T" **that** was introduced in 1908 is the car **that** enabled millions of people, not only in the U.S., but all over the world, to own **their** own autos.
- Most cars of **this** era had no electrical systems except an ignition system for an engine.

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|---|---|
| **DOMAIN:** | Foundation Academics |
| **MODEL:** | Linked courses |
| **STRATEGY:** | Jointly developed; jointly delivered |
| **COLLEGE:** | West Valley College, California |
| **Contact:** | Sally Aitken (408/741-2003) |

**Career Preparation Innovation**

Occupational courses were linked with a Vocational English as a Second Language and a writing course to provide academic and social support, as well as direction in comprehension and study skills.

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## DESCRIPTION (COURSE OUTLINES)

Ten students who were enrolled in Introduction to Fashion Design and History of Fashion who had need of support services were identified for a VATEA grant project. A special section of ESL was scheduled one hour before Fashion Design, during which time the students worked on fashion terminology worksheets developed by the ESL instructors. Special sections of the Writing Lab were scheduled for one hour immediately after the two Fashion classes during the day, and before Fashion classes offered at night. In addition, audiotapes and handouts of fashion terminology were created for the ESL group, although soon most of the entire class elected to use them. Retention was much higher than usual, and attendance was nearly perfect. Student preparation was increased, and spontaneous, culturally diverse study groups formed. In addition, the instructor developed advanced organizers (lecture guidelines) to aid all students in identifying key concepts from the lectures and reading assignments, which 94% of the students rated as helpful in studying and preparing for examinations.

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## SAMPLE LEARNING ACTIVITIES

**Vocabulary:** Fill in the blanks with one of the word(s) listed below.

rag trade labor union piece work

1. A ________________ is an organization formed to protect apparel factory workers' rights and ensure safe working conditions.
2. Also called section work, ______________ is assembly line production of apparel where each swing operator does one part of the production.
3. An American slang term referring to the clothing business is ______________.

**Vocabulary:** Match each word or phrase with the correct meaning.

____ 1. jobber a. a manufacturer sells the rights to retail its merchandise
____ 2. fashion piracy b. the copying of a designer's garment design
____ 3. franchising c. someone who buys unused fabric and resells it

**Advance Organizer (Lecture Outline)**

- Why is it important to consider consumer's wants and needs?
- Why is it important for a designer to understand fashion cycles and develop a sense of timing?
- Fashion cycles have two distinct features. What are they?
- Identify and define the five states of the Fashion Cycle.
- Compare the length of a fashion cycle for these two types of fashions: fad and classic.

**DOMAIN:** Foundation Academics/Job Specific/Generic Technical/Systems
**MODEL:** Cluster (Developmental-level "Bridge" Program)
**STRATEGY:** Jointly planned; jointly delivered
**COLLEGE:** Indian River Community College, Florida
**CONTACT:** Ray Isenburg (407/462-4783)

**Career Preparation Innovation**

A full-time load of credit and noncredit classes, structured so that students apply academic concepts to occupational tasks while they remediate basic skills, learn generic technical skills, and follow the work product through a system.

## DESCRIPTION

Within the established Indian River Community College Associate Degree and Certificate offering, the Technical "Bridge" Curriculum Option is designed for students with the desire to pursue technically oriented contemporary career opportunities; build a strong foundation in the required areas of mathematics, English, reading, and science needed to compete successfully in the current and future job market; experience educational options available at the postsecondary (community college) level; and be successful in securing employment and continuing their education.

High school students at-risk for college failure are "recruited" to enroll in the "Bridge" Program, which includes 15-16 units per semester, part credit and part noncredit. In addition, returning adults are enrolled in the program. The key elements included in the specially designed foundation program include Foundation Academics and two contemporary technology classes—Industrial Technology or Business Technology. Now in its fourth year, the results have been positive, with non-Bridge students enrolling in the credit-bearing courses.

## OUTLINE OF COURSES

**Introduction to Applied Technology (3 credits):** Using an interdisciplinary approach, this course examines the process of technological change, explores divergent technological domain, utilizes hands-on skill development, and develops a foundational understanding of technology that incorporates problem solving and critical thinking. Students generate drawings on the computer using basic Autosketch commands, and perform cross-application of Autosketch technology with multiple areas of automotive, agribusiness, electronics, architectural/interior design, CAD/CAM, civil engineering, or environmental control/HVAC technology. In addition, students explore the fundamental concepts; changing opportunities; and the social, cultural, and technological issues associated with careers in Construction Technology, Electronics Technology, Architectural/Interior Design, Environmental Control/HVAC, GPS/Civil Technology, Waste Water Management, CAD/CAM, Automotive Technology, Agribusiness Technology, and Computers. Students complete research on a technological artifact from a year of their choice, encompassing the historical, social, cultural, and technological significance of the artifact.

**Applied Physics (3 credits):** For each subunit encompassing the topics of Force Transformers, Power, Energy, Resistance, Rate, Work, and Force, students spend approximately two hours in lecture/discussion, one hour in math skills lab, and two hours in hands-on physics applications. Subunits are related to the mechanical, fluid, electrical, and thermal principles on which modern equipment operates. Course texts are *Physics for Technicians* (CORD) and *Is Your Math Ready for Physics* (Gleason).

**Introduction to Business Technology (3 credits):** Provides a historical perspective related to the role of technology associated with American business operations; emphasis is on the technological advances made in a variety of business settings while specifically focusing on applications in accounting, advertising, finance, human resources, management, and research and development. Students generate text using a word processor; perform business calculations using an electronic spreadsheet; search, add, and update database records and reports; prepare financial statements using an electronic spreadsheet; write checks and reconcile checkbook using financial software; access resources electronically; evaluate his or her own entrepreneurial skills; prepare an advertising plan and campaign; and develop a business plan for a new product. Course uses *Computer Simulations for Business* (published by Allyn and Bacon, 1990).

**Applied English Fundaments (3-6 credits):** Reviews fundamental concepts in grammar and mechanics while developing organizational skills for the building of paragraphs and short essays. Practice is on a variety of writing skills including selection of topic, formulation of thesis, achievement of unity and coherence, proper choice and use of transitional elements, and proper choice and development of basic methods of expansion.

**Applied Math (3-6 credits):** Builds skills and confidence in arithmetic competencies while making a transition from arithmetic to algebra. Course emphasizes a practical approach whereby students solve real problems in an applied setting. The relationship of math to a variety of business and industrial settings is stressed throughout the course.

**Practical Reasoning (1 credit):** Utilizing an instructor-designed Logic Assessment Inventory and interactive software to identify possible fallacies in students' logic, this course teaches students to recognize and avoid self-defeating thinking as a means to stress reduction, greater assertiveness, effective decisionmaking, and improved personal relationships. Text: *Caution: Faulty Thinking Can Be Harmful to Your Happiness* (Cohen).

**Applied Reading (3-6 credits):** Provides students with individual and group instruction in reading skills through diagnostic/prescriptive techniques. In addition to improving reading comprehension skills and reading rate, Applied Reading addresses word analysis skills, sight vocabulary, word meaning, spelling, and study skills.

**Sample One Semester "Bridge" Option**

| | |
|---|---|
| ** Applied English | 3 credits |
| ** Applied Mathematics | 3 credits |
| Applied Physics | 3 credits |
| Intro to Contemporary Business Tech | 3 credits |
| Intro to Contemporary Industrial Tech | 3 credits |
| Contemporary Practical Reasoning | 1 credit |

** Credit not applied toward A.S. degree

**Sample Two Semester "Bridge" Option**

| Semester One | Semester Two |
|---|---|
| ** Applied English - 3 credits | ** Applied English - 3 credits |
| ** Applied Mathematics - 3 credits | ** Applied Mathematics - 3 credits |
| ** Applied Reading - 3 credits | Applied Physics - 3 credits |
| Intro to Business Tech - 3 credits | Intro to Industrial Tech - 3 credits |
| Principles of Academic and Personal Development - 3 credits | Multicultural Problems and Issues - 3 credits |
| | Practical Reasoning - 1 credit |

**Credit not applied toward A.S. degree

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| | |
|---|---|
| **DOMAIN:** | Foundation Academics/Job Specific/Work Organization |
| **MODEL:** | Cluster (Bridge into Licensed Health Careers) |
| **STRATEGY:** | Jointly designed and funded with JTPA, JOBS, and College |
| **COLLEGE:** | Penn Valley Community College, Missouri |
| **CONTACT:** | Deborah Mann (816/759-4036) |

### Career Preparation Innovation

Transitional program to prepare re-entry, disadvantaged applicants for admittance and successful completion of the Licensed Practical Nurse program.

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## DESCRIPTION (PROGRAM COMPONENTS)

Historically, welfare recipients have not been successful in gaining admittance into the college's practical nursing program, even though a good number already possess Nurse's Aide or similar licenses. Those who enter often fail to succeed and complete the program due to academic and/or personal barriers. Penn Valley made a commitment to its community partners, the local Private Industry Council and the State's Welfare-to-Work program, to develop and initiate an intervention to address this problem and reverse this negative and disturbing trend. The mission was twofold: (1) to prepare participants to pass the LPN entrance exam and (2) to help ensure completion for program participants.

The program has two major components: (1) academic preparation and (2) a clinical component at a health care facility. Areas of emphasis include academics, study skills, learning style identification, communication, parenting skills, assertiveness, budgeting, and other support services as needed. The program strives to recognize participants as complex adults with multiple but not insurmountable barriers. The program is in its sixth cycle and results thus far are impressive and exciting.

To date, 79% of the participants have completed the academic portion of the program; of those, 75% gained admission and enrolled in the LPN program, and of that group 80% completed the LPN license. The total success rate is a little under half, an ambitious outcome for a program that entails 1,400 hours (nearly a calendar year @ 30 hours per week) of classroom and clinical preparation before entering the 12-month LPN curriculum.

**Program Outline (in classroom hours)**

Reading comprehension and writing skills (50); Math (55); Science (84); general study skills (15); individual learning style identification and application (10); Survival Skills (78 hours, of which 30 occur during Orientation Week); Academic Lab (55); CPR (8); Career Planning (6); Field trips to a long-term care facility, hospital, Blood Bank, funeral home, and library (15); and Orientation, Pre- and Posttesting, Health Occupations Entry Exam, and celebrations. In addition, each participant completes approximately 1,000 hours of clinical experience, meeting license requirements for Nurses Aide, Certified Medical Technician, Restorative Nurse Assistant, or Insulin Plus Assistant.[3]

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[3] The combination of short-term basic skills remediation, followed quickly by a clinical experience from which participants earn state licenses, progressing on to a higher level of academic preparation and clinical experience for a more complex career represents the spiraling ladder of training and education which W. Norton Grubb has advocated. In addition, this program demonstrates a productive and efficient relationship between a state agency, a local community funding provider, and a public educational institution—a model that reveals the potential for benefits to students, the community, and the institutions themselves from collaborative fiscal and delivery systems.

**DOMAIN:** Generic Technical/Systems
**MODEL:** Infusion
**STRATEGY:** Joint planning and delivery
**COLLEGE:** Cape Cod Community College, Massachusetts
**CONTACT:** Carol Dubay (508/362-2131)
Luise Speakman/Michael L. Bejtlich

### Career Preparation Innovation

Under a mini-grant for integrating SCANS skills into courses, instructors from Nursing and Management developed a modified Harvard Case Study Method to analyze conflicts related to resource allocation/prioritization of care-giving.

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## SAMPLE LEARNING ACTIVITY

Read the following case carefully, and make use of the appended guidelines to determine the best solution, using a systematic, critical, problem-solving approach.

Jane, a recently licensed RN on a surgical unit, has been asked several times during her shift for some medication for pain by one of her assigned patients, Mr. Smith, who had abdominal surgery two days ago. Jane decides to administer a placebo, for which there was no order. Mr. Smith reports that he did not get any relief from pain with the medication he received. Jane reports her intervention regarding Mr. Smith's pain to the night nurse, and the following morning the night nurse reports Jane's medication intervention to you, the Nurse Manager. How will you handle Jane's behavior?

(Wise, *Leading and Managing in Nursing*, St. Louis: Mosby, 1995.)

List all the facts of the case in "bullet fashion" under the following headings (SWOT):

- STRENGTHS - Positive attributes of the internal environment
- WEAKNESSES - Negative attributes of the internal environment
- OPPORTUNITIES - Positive attributes of the external environment
- THREATS - Negative attributes of the external environment

- NON-SWOT FACTS - Other facts that don't fit into the above (four) categories

In your document, the actual facts themselves will be bulleted under the heading (e.g., STRENGTHS:). You must list at least fifteen facts in each of the first four categories, and there is no numerical requirement for the last. You may array your facts down the page or in two separate columns if you like. Facts are facts, not suppositions. Don't make things up or project into the future. The facts are the evidence based on your research.

- **Problem Statement:** The problem is in the present, so write it in the present tense! Only list a *single* problem. **Hint:** The problem is different from the symptoms.
- **Alternative Solutions:** List at least five alternative solutions to potentially solve your problem. Your solutions must be numbered for later identification in the criterion chart. Your solutions must be within the realm of reason and actually address the problem identified previously.
- **Criterion:** Create your own version of a criterion chart such as the one appended. The purpose of the criterion chart is to aid as a tool in the comparison of alternative solutions against criterion which must include (but are not limited to) the following: (1) +Feasibility—The reasonableness that the solution could be implemented; (2) +Effectiveness—If implemented, the degree to which the alternative would solve the problem; (3) +Efficiency—The degree to which inputs will effectively be used in the process of solving the problem; (4) -Cost—The attending financial costs involved?; (5) -Risks—The probability that adverse consequences will be generated (6) -Time—How long to implement this solution; and (7) +Ethical Correctness—How morally correct is this solution?
- **Best Solution:** Next, discuss each alternative and how it stacked up to the criterion.
- **Implementation:** Explain how your best solution will be put into action. Be specific.
- **Feedback:** Who will you get feedback from, in order to assure that the problem (challenge) has actually been solved? Why is this feedback important?
- **Charts and Visuals:** Your case must include at least two visual charts or graphs.
- **Research:** You are responsible for conducting extensive outside research.

| | |
|---|---|
| **DOMAIN:** | Foundation Academics/Generic Technical |
| **MODEL:** | Applied (in Corrections Program) |
| **STRATEGY:** | Independent planning and delivery |
| **COLLEGE:** | New Hampshire Technical College–Laconia |
| **CONTACT:** | Roy Whalen (603/524-3207) |

### Career Preparation Innovation

Transformations is an inmate program offered by the New Hampshire Department of Corrections and NHTC–Laconia. Simulated business activities provide a context for acquisition of basic skills. To date, program graduates have demonstrated significantly lower recidivism statistics and higher average pay rates compared to similar groups that have been returned to their communities. Although the entire Transformations program includes several aspects of technical education, and is block scheduled, only one component is reported here.

## DESCRIPTION (COURSE OUTLINE)

### Management with Computers (3 Credits)

A systems approach to computers as coordinated business tools; integration of software applications in data sharing and communications. Emphasis on analysis and selection of hardware and software to complement the management/business decisionmaking process.

### Text

Boyce & Boyce. (1990). *Sails for Rent.* Cincinnati, OH: South-Western Publishing Company.

### Course Outcomes

Gain an understanding of information management using word processing; develop promotional material; use spell and grammar check; originate introductory information; combine information; use graphics in letterhead; gain knowledge of information management using databases; create databases; merge database with word processing file; design and test a spreadsheet; update, expand, modify, and print spreadsheet; produce charts and graphs and make financial decisions accordingly; import information from one file to another; import spreadsheets into word processing documents; gather information and plan, write, and edit report; use forecasting to predict future activities; update and combine databases; and prepare mailing to selected customer base.

**Topics**

- Creating Promotional Materials: spell check, grammar check, originating introductory paragraphs, merging files, and writing memos
- Reaching Customers: create and key in database template and records, merge-print letters, print mailing labels, design targeted customer database, write letters, and print selected mailing labels
- Reporting: Plan spreadsheet and input template; perform manual error check; input graph data and print data; add sections for payroll, operating expenses, and profit/loss information; use functions in spreadsheet; and schedule using spreadsheet
- Expanding on Reports: edit information for improving financial reports, expand spreadsheets, make decisions from spreadsheets, import spreadsheet information and graph, verify work, and produce report
- Planning for a Business Future: design surveys, personalize orders, design spreadsheets for analysis, fax, and add graphs

**DOMAIN:** Education for Citizenship
**MODEL:** Hybrid course (anthropology and business)
**STRATEGY:** Independent design and delivery
**COLLEGE:** Butler County Community College, Kansas
**CONTACT:** Jack Oharah (316/322-3108)

### Career Preparation Innovation

This course presents cultural anthropology adapted to the world of business in an attempt to aid students in understanding the complexities of operating in foreign markets.

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## DESCRIPTION (COURSE OUTLINE)

### International Business Culture (3 credits)

### Texts

Terpstra, Vern, & David, Kenneth. (1991). *The Cultural Environment of International Business* (3rd ed.), Cincinnati, OH: South-Western Publishing Co.

*Do's and Taboos Around the World: A Reader by the Parker Pen Company* (2nd ed.). (1990). New York: John Wiley & Sons.

### Course Objectives

At the completion of this course, students should be able to

- Define cultural systems.
- Compare and contrast different cultures.
- Identify differing language connotations and their effect on business transactions and international policies.
- Examine the role of education, values, and religion in shaping cultural behavior.
- Analyze policy implications of cultural differences.

### Course Content

Unit 1. Basics of Culture: Define culture; Analyze intercultural communications problems
Unit 2. Language: Define language; evaluate international differences in language; identify the influence of languages on international business

Unit 3. Education: Define education; evaluate effects of cultural training; identify international differences in education; analyze relationship of education and country policies; analyze relationship of education and company policies

Unit 4. Religion: Define religion; compare international differences in religion; discuss policy implications for the multinational firm

Unit 5. Values: Describe role of values in the economy; illustrate values towards time; illustrate values toward work, wealth, and achievement; illustrate values toward change

Unit 6. Technology: Define technology; identify international differences in technology; explain policy implications for host countries; illustrate policy implications for multinational companies

Unit 7. Social organization: Explain unfamiliar social organizations; describe implications of foreign social organizations for the multinational firm

Unit 8. Political environment: Define global-level concepts; define country-level concepts; analyze political environment and the multinational firm

**DOMAIN:** Job Specific/Foundation/Citizenship/Generic Technical
**MODEL:** Infusion of core competencies into existing courses
**STRATEGY:** Across-state design; independent implementation
**COLLEGE:** New Hampshire Technical Institute
**CONTACT:** Diane Miles (603/524-3207) or Jeff Rafn (603/271-2722)

### Career Preparation Innovation

Using multiple focus groups in campuses across the state, the New Hampshire Technical College system designed a set of core competencies for all students at two-year institutions. Individual faculty identify which competencies are addressed directly or indirectly in each course. Assessment of competency is related to field of study.

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## DESCRIPTION

### Core Competencies—New Hampshire Technical College system

**1.00 Human Relationship Skills:** Identify personal and professional ethical standards, stated and implied; analyze ethical and moral issues; use time management skills to meet schedules and deadlines; demonstrate observance of rules and standards appropriate to the environment; recognize conflict management skills to promote growth and positive outcomes; use praise and criticism as a basis for personal and professional development; participate as a team member to implement and evaluate a plan; evaluate role as a team member; discuss how perceptions about individual and group differences (e.g., gender, intellectual, physical, emotional, values, geographic, ethnic, and socioeconomic) affect judgment and relationships; work independently with periodic supervision and feedback.

**2.00 Communication Skills:** Demonstrate the skills to construct meaning from multiple sources; demonstrate the ability to read, comprehend, and retain professional and nonprofessional materials; document work performed within the fields of study; write directions which are understandable and accurate; write correspondence and reports as required by the fields of study; use correct grammar, language, spelling, and punctuation; present views which are informed, logical, and organized; make an effective presentation to a group; write research papers using standard criteria (e.g., MLA, APA, and so on); participate cooperatively in one-on-one and group discussion; demonstrate public speaking skills; apply the elements of successful interview techniques; apply techniques of successful job application process; use active listening skills with various audiences; follow written and oral directions; select resources appropriate to the research topic; integrate materials from resources in oral and/or written presentations; demonstrate awareness of various audiences and purposes for both written and oral communications.

**3.00 Critical Thinking:** Analyze an issue or problem before commenting, writing, or judging; examine issues by identifying assumptions; predict results from an analysis of a situation or problem; categorize information; sort relevant from irrelevant data; integrate new information with known concepts; use research and resources in decisionmaking processes; propose possible solutions to identified problems; develop long- and short-term goals; prioritize tasks and responsibilities; create plans to meet goals; select strategies to achieve plans; implement strategies and plans; evaluate strategies and plans to meet goals from a variety of perspectives; evaluate credibility of information sources; compare actual practice with the ideal; and apply specific information learned to solve problems.

**4.00 Global Perspective:** Demonstrate awareness of the effect(s) that cultural differences have on world and personal perspectives; demonstrate awareness of the development of cultural institutions and values; demonstrate an awareness of current events and social issues; and discuss the changing position of the United States and other nations.

**5.00 Mathematical Processes:** Perform operations with rational numbers, percents, signed number, and ratios/proportions; solve linear equations; solve word problems involving linear equations; estimate/extrapolate to solve problems; interpret data accurately from tables, graphs, and charts; and use calculators and/or computers to solve mathematical problems.

**6.00 Scientific Processes:** Discuss the impact of science on society; apply scientific method to solve problems; document observations of measurable phenomena.

**7.00 Technical Skills:** Describe what constitutes ethical behavior and legal requirements for a specific field of study; apply the technical skills of the field of study; apply principles for providing a safe working environment (e.g., local standards, national codes, government regulations, and so on); operate equipment safely; demonstrate basic computer proficiency relevant to the needs of the field of study; use policies and procedures consistent with the mission of the organization; and demonstrate use of required instruments related to a field of study.

**8.00 Learning Skills:** Discuss the value of lifelong learning; assess own learning style, recognizing strengths and weaknesses associated with learning style preferences; identify one's own academic strengths and areas of growth; use determined strengths/weaknesses as a basis for current academic and future plans; and develop personal strategies for test preparation and test-taking.

**DOMAIN:** Job Specific/Foundation/Citizenship/Generic Technical
**MODEL:** Infusion of core competencies into existing courses
**STRATEGY:** Jointly developed; independently implemented
**COLLEGE:** Washtenaw Community College, Michigan
**CONTACT:** Pat Cygnar (313/973-3374)

**Career Preparation Innovation**

College identifies core competencies which are used in place of general education requirements for graduation.

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## DESCRIPTION (TRANSCRIPT RECORDING FORM)

Instructors determine which core competencies they wish to meet within a course, with all competencies required to be offered within a degree sequence.

The 24 core elements are listed on the student's transcript alongside courses completed and attempted and grades and credits earned. Students select courses within their preferred sequence to encompass all of the core elements. The college catalog lists the core elements met by each course to assist students in planning courses and programs.

**Sample Grade Report**

TERM:

CORE ELEMENTS ASSESSMENT:
_ 01 Critical Reading/Effective Speaking
_ 02 Using Information Sources
_ 03 Written Expression
_ 04 Basic Mathematics
_ 05 Mathematical Problem Solving
_ 06 Elementary Statistics
_ 07 Using Concepts and Ideas
_ 08 Developing Ideas
_ 09 Problem Solving Analysis/Solutions
_ 10 Recognizing Facts from Fallacies
_ 11 Using Computer Systems
_ 12 Computer Ethics and Laws
_ 13 Awareness of Artistic Experience
_ 14 Variety of Human Experience/Humanities
_ 15 Principles of Scientific Inquiry
_ 16 Human Biological Principles
_ 17 Natural Sciences & Environment
_ 18 Principles of Technology
_ 19 Technological Systems
_ 20 Technology/Society/Environment
_ 21 Methods of Social Sciences
_ 22 Democratic Principles and Values
_ 23 American Institutions
_ 24 The Global Community

**DOMAIN:** Systems/Generic Technical
**MODEL:** Cluster/Linked courses
**STRATEGY:** Independent faculty designed and delivered
**COLLEGE:** College of Du Page, Illinois
**CONTACT:** Gary Drafke (708/858-2800, ext. 2592)

## Career Preparation Innovation

The Business Simulation Project was designed by an independent instructor and encompasses seven Business, Management, and Marketing classes linked together through a fictitious business.

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## DESCRIPTION (COURSE OUTLINE)

### The Business Simulation

The Business Simulation Project at the College of DuPage combines several educational methods to uniquely solve problems in education and in business. The project encompasses seven Business, Management, and Marketing classes linked together; a simulated business; application of course materials; realistic communications; teamwork and crossfunctional teams; active, collaborative, and mastery learning; emphasis on higher-level cognitive processes (application, analysis, synthesis, and evaluation); and integrated computer usage and personal productivity software. Students enrolling in a Business Simulation course receive the same credit and cover the same material as they would in a more traditional, or lecture, section. The difference is in the way they learn and the context in which the materials are applied.

The simulated business is the key to linking the seven business courses. It provides the framework for the interrelationships among the courses and allows for the material within each course to be applied realistically. The application of all course material is the key to learning within the business simulation. Rather than listen to a lecture, the course materials are applied in a controlled, but realistic setting.

To reinforce the relevance of the course materials during application, each chapter in the textbook is presented as a solution set for a particular problem. Students generate solutions which are tested to determine the best one given the current situation. The philosophy is that the course material is not a collection of static facts to be memorized, but is a body of knowledge useful in everyday business life.

The business simulation provides for communications opportunities not possible in a traditional class. Communication is an element common to all seven courses and the simulation contains interpersonal as well as intergroup communications. Interpersonal communication occurs within each department and between department managers and students within a department. Intergroup communications occur almost immediately as the students learn that all of the departments are naturally linked.

Teamwork within the departments and within crossfunctional teams provides for additional communication opportunities. The teams also answer two major concerns of business. The business literature contains many calls for students who can work well with others. Businesses are also calling for people that understand the perspective from departments other than their own. The business simulation responds to both concerns. Nearly all of the work performed in the groups is a team effort. Some assignments require individual effort first, followed by teamwork, but the team component is always present. Also, a number of crossfunctional teams must be created. The culmination of the communications, teams, and the simulation experience usually occurs around the middle of the quarter when the students realize that there are not seven autonomous groups, but one company with seven facets.

## Educational Component

The business simulation also provides an environment conducive to the application of three learning concepts: (1) active learning, (2) collaborative learning, and (3) mastery learning. Passive learning is often used to describe traditional lecture courses. Active learning requires the student to participate to a greater degree. The instant and constant application of course material in the business simulation provides maximum active involvement for the student (and the faculty). Collaborative learning is also valued for increasing student involvement. It has been said that one never learns as much as when one has to teach something. Collaborative learning is applied in the simulation when, for example, the Production students are required to explain their job well enough to the Human Resources students that the Human Resources department is able to prepare an evaluation instrument for the Production department. The third learning concept, mastery learning, is employed by allowing students to resubmit most of the unsatisfactory work. Students take feedback from the faculty and improve on their work until they have mastered the concept or technique. Rather than failing a test and receiving a lower grade, the simulation students leave knowing they can apply the material correctly.

Employing active, collaborative, and mastery learning with the application of all course material in a realistic business setting requires the students to process information on all six levels of Bloom's cognitive taxonomy. Knowledge and comprehension are important, but the simulation assignments stress application, analysis, synthesis, and evaluation. The philosophy is that it is one thing to be able to identify or repeat a definition, it is another to be able to apply it, and it is quite another matter to apply it to people in a setting that is as realistic as possible.

### Computer Component

Each department (class) has its own computer, with additional computers for busy periods. A standard package of easy to use software (word processor, spreadsheet, and so on) is available on all computers. Different departments also have special packages for their specific applications. Many of these are personal productivity and human resource software packages and are unique to the business simulation classes.

### Summation

The Business Simulation Project at the College of DuPage is a combination of two of the most effective methods of learning. It combines the accumulated knowledge and theoretical bases of each class, as would be found in any traditional class with the "on-the-job," apprentice type learning of actually performing the work. The additional integration of communications, interpersonal relations, teamwork, modern learning theory, and computer usage, makes this unique combination a potential model for others—a model that serves the needs of students, businesses, and educators.

**DOMAIN:** Job Specific/Generic Technical/Systems/Foundation Academics
**MODEL:** Capstone project assessment
**STRATEGY:** Independent design and delivery
**COLLEGE:** Columbus State Community College, Ohio
**CONTACT:** Shirley Palumbo (614/227-2501)

## Career Preparation Innovation

Capstone projects culminate the Microcomputer and Construction Programs.

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## DESCRIPTION (COURSE OUTLINE)

### Final Project Microcomputers (5 credits/2 classes/8 lab hours per week)

Students work either in small groups or independently to design and develop appropriate forms, presentations, data entry, and retrieval procedures using various mediums for a typical small business system. Students evaluate appropriate hardware and software for a given system.

- **Define Problem:** Define the hardware and software problem; define viable hardware and software alternatives; define existing problems in project; define database and spreadsheet requirements; identify viable forms management and management reporting alternatives; create new reports and forms as required; and utilize communication skills by speaking clearly and actively listening to conduct interviews of internal and external parties in order to gather pertinent information.

- **Analyze Problem:** Analyze the problem and develop a rough list of inputs and outputs required to develop the system project; analyze the problem and develop a list of individual objectives required to present a solution; develop a database system; create a spreadsheet system; evaluate hardware and software; and two additional areas.

- **Develop Solution:** Produce hardware and software evaluations and recommendations; database and spreadsheet evaluations; training procedures; management summary reports; and data flow, forms, and management reporting documents; write clearly and effectively.

- **Develop Software for Solution:** Work collaboratively with team members to include recognition of nonverbal behavior, interactions, prejudgments, and interpretations; engage in group decisionmaking to solve any project problems; recognize and comprehend individual member rights and responsibilities of group membership; utilize conflict resolution strategies to encourage cooperation and group success.

- **Present Final Project:** Utilize communication skills to speak clearly and effectively to make a persuasive presentation to instructor, related faculty, team members, and class; write clearly and effectively to produce transparencies, graphs, and charts for presentations.

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## DESCRIPTION (COURSE OUTLINE)

**Construction Project Management (3 credits/2 classes/3 lab hours per week)**

The class is structured into two segments. The first segment is standard instruction; the second is a laboratory for designing, creating, and evaluating the capstone project. The Primavera Computer Simulation is used as students track a construction project through the processes of project start-up, control assignments, control structures, organizational forces, subcontractor and vendor management, and move-out phases.

- **Project Management in the Construction Industry:** Changing role of the contractor's project manager; start of the construction process; impact of general conditions on project management; impact of estimating on the project managers
  - The student will be able to identify how the general conditions of the contract can influence the role of the project manager, and to evaluate the impact of estimating on the project manager and the construction project.

- **Company and Project Organizational Structures:** Forms of organizational structures; organizing the job staff in the office; organizing the project staff in the field; pre-construction planning activities in the field
  - The student will be able to develop an office and field staff organizational structure chart, and to relate preconsecution planning activities to the field organizational structure.

- **Personnel Duties:** Position definitions and job descriptions; formal/informal policies and procedures; evaluating staffing and personnel evaluation methods for a project
    - The student will be able to create job descriptions, company policies, and procedural manuals for a construction company, and identify staffing needs and personnel evaluation methods for a project.

- **Buying Out the Job:** Formulating subcontract work packages; awarding and selecting subcontractors and vendors
    - The student will be able to structure work packages, award a subcontract to a subcontractor, and award a purchase order to a vendor.

- **Project Control Mechanisms:** Field labor, equipment, and material reports; incorporating change orders into project operations; development of management recap reports; short-term interval production schedules
    - The student will be able to prepare status reports on field resources, identify the impact of change orders on the project, prepare recap reports, and generate SIPS forms.

- **Change Orders/Liquidated Damages/Claims:** Verbal and written authorizations of changes; costing change orders; principles of liquidated damages and claims for delays
    - The student will be able to differentiate between the legal authority of verbal and written change authorizations and write and prepare construction claim documentation.

- **Field Documentation:** Documentation to owner, A/E, vendors, and subcontractors; field office documentation; complying with governmental documentation
    - The student will be able to prepare internal and external documentation and identify and prepare governmental documentation requirements.

- **Subcontractors and Vendors:** Tracking of project subcontracts and purchase orders; submittal approvals; subcontractor/vendor status evaluations; legal relationships with subcontractors and vendors
    - The student will be able to identify tacking procedures and manage submittals for subcontractors; identify legal relationships between vendors,

subcontractors, and general contractors; and evaluate the effectiveness of subcontractors and vendors on projects.

- **Project Close-Out and Termination:** Project demobilization; punch lists, inspections, and testing; operations and submittal logs; operating permits and commissioning procedures; owners' employee training
    - The student will be able to sequence a project demobilization; process punch lists, inspections, and testing; identify and create operations and submittal logs; and identify commissioning procedures.

**DOMAIN:** Job Specific/Generic Technical/Systems/Foundation Academics
**MODEL:** Capstone Project Assessment
**STRATEGY:** Independent design and delivery
**COLLEGE:** Sinclair Community College, Ohio
**CONTACT:** Bonnie Bensonhaver (513/449-5164)

## Career Preparation Innovation

As a final demonstration of competence, students in this course complete a substantial, authentic, work-like project. This capstone project serves both as a means of assessment for program completion, and as a means to convey competency to future employers.

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## DESCRIPTION (COURSE OUTLINE)

### IET 216: Facilities Layout Course Content

Introduction to plant layout and materials handling; Plant site selection; Case study: The White Manufacturing Company; The plant layout problem; Plant layout procedures (in general); Types of layouts; Group technology; PERT; Lab: PERT planning; PERT plan for the course project; Activity relationships; Process and flow pattern techniques; Flow pattern planning techniques; Lab: Determine the number of machines needed; Wheel cylinder packaging and pallet pattern; Project flow pattern; Emerging technologies - PL & MH; CAD/CAM; Robotics; Integrated manufacturing; Lab: Introduction to CAD; Introduction to material handling; Material handling equipment; Material handling systems; Planning and costs; Robotics and material handling; CAD case study; Shipping and receiving; Plant services; Work area planning; Determine space needs; Quantitative techniques in PL & MH; Plan services needed; Plan rough layout; Selling your plan.

Lab: Plan MH needs, Project report requirements, Manpower needs and costs

### Project Description: Facilities Layout

You shall design a factory with the capacity to machine as per required specifications a total of 504,000 wheel cylinders per year. In addition to information that will be handed out detailing the manufacturing methods to be used, the assumptions listed below will be used:

- The facility must be able to produce, at any time, any one of 256 similar products from one basic casting. Lot sizes for each production run will not exceed 200 parts per lot.

- A 5% scrap rate.
- Two shift operation (10% wage premium for second shift).
- Holidays that the plant will shut down for include New Year's Eve, New Year's Day, Good Friday, Memorial Day, July 4th, Labor Day, Thanksgiving, and seven working days at Christmas.
- Two-day supply of both raw material and finished goods.
- One backup set for all tooling, dies, jigs, fixtures, and quality control instruments needed.
- You must plan to be able to double plant capacity within five years without causing disruption of the original manufacturing operations.
- A complete resetup of each machine after 5,000 pieces.
- During each shift there will be a 30-minute lunch (dinner) break, two (2) 10-minute rest breaks, and a 15-minute cleanup break.
- Straight line depreciation for five years on all equipment and furniture purchased.
- Straight line depreciation for ten years on the costs of construction for a new building.
- All tools, dies, jigs, and fixtures will be expensed in the year of purchase.
- You will be required to purchase four times as much land as the original site calls for.
- Wage and salary benefits of 40% of direct wage and salary costs.

The instructor may change or add to the assumptions as need be.

Your final report shall be in two parts.

1. A written report supplying the information listed below:
    - A layout drawing of the plant site.
    - A detailed drawing of the office and factory layout.
    - A written section describing your overall layout, the material handling system, and how it works.
    - A total cost summary of all costs and the per year average for the next ten years.
    - A list of all direct and indirect labor by shift and the cost/year for this labor.
    - A list of all salaried people and their cost/year.
    - An estimate of total direct material cost for finished goods.
    - An estimate of total scrap cost.
    - A complete list of all production machinery needed and its cost.

- An estimate of the cost of freight and installation of all equipment.
- A complete list of all furniture needed and its cost.
- A complete list of all dies, jigs, fixtures, and quality control instruments needed.
- A list of all material handling equipment needed and its costs.
- A complete list of all packaging material needed and its cost.
- An estimate of total site development, land, factory, and office construction costs.
- An estimate of total setup time by machine type.
- An estimate of total benefit costs.
- A completed flow process chart.
- A flow diagram drawn on the factory layout drawing.
- A calculated cost per completed part.

The instructor may change or add to these requirements as needed.

This report should be typed and prepared in a professional manner suitable for submission to the Board of Directors of a large manufacturing company. It is recommended that, wherever possible, pictures, diagrams, charts, and so on, be used.

2. An oral report covering the information listed above. Your team's role should be that of a group of engineers making a project report to the firm's Board of Directors. Your presentation preparation, dress, and so on, should be done with this role in mind.

The project will be graded upon how well your team meets the requirements detailed above and how well the plant layout and material handling techniques and principles presented in class are applied in the project. Only grades of "A," "B," or "F" will be assigned.

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|---|---|
| **DOMAIN:** | Job Specific/Foundation Academics/Generic Technical/Systems |
| **MODEL:** | Capstone Project Assessment |
| **STRATEGY:** | Independently planned and delivered |
| **COLLEGE:** | San Diego City College, California |
| **CONTACT:** | Freddie Richards (619/230-2578) |

### Career Preparation Innovation

A sequence of two courses, taught by an adjunct instructor who is a expert from industry, serves as a final assessment for the Electronics program and as a means of communicating student competency to employers.

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## DESCRIPTION

### Real World Activities in the Classroom

The capstone sequence of courses for the Electronics program has been modified to provide a more "real world" atmosphere. These courses are taught by an outstanding adjunct faculty member, who is a Senior Engineering Manager for an industry-leading electronics designer and manufacturer. By using a currently employed, talented, adjunct faculty member to teach the capstone sequence of courses, we provide our students with the latest in what is needed in order to be a successful electronics technician.

The laboratory activities associated with the final sequence of courses were completely restructured to create a "real world" atmosphere. The learners enrolled in this capstone series are organized into small engineering design teams. Teams design a microcomputer controller for a device to track the sun across the sky. Each engineering team submits for guidance and consultation a timeline for the activities needed to construct, test, and present the prototype design. This timeline would include such items as initial design draft, final design, component vendors (three vendors are required; if a vendor goes out of business, you need ready information for additional sources for components), prototype assembly dates, and the date unit will be ready for final testing. In addition to the timeline documentation, each engineering team uses designing software to generate a schematic diagram for their design. The engineering teams purchase the components needed for their microprocessor interfacing prototype. Once the unit is operational, the professor inserts faults (i.e., cutting wires, switching components, and so on) in order to sharpen troubleshooting skills. Finally, the engineering team members orally present their prototype solution and its design to their classmates.

The incorporation of the five competencies of SCANS is quite obvious in this design project. The team member identifies, organizes, plans, and allocates the necessary resources for the project. Interpersonal skills are sharpened in working with fellow team members. The nature of the project requires each team to research design information and incorporate it into their microcomputer controller project. A sun tracking device incorporates a variety of technologies, including optics, motors, and limit switches. The team members must develop an understanding of how these various technologies fit together to form an efficient sun tracking system. Finally, the teams work with a variety of technologies—from the schematic capture software to generate the schematic, to the use of a logic analyzer in the analysis of the design, to the use of a ROM programmer to program the firmware.

The importance of being able to work/study in a "real world" atmosphere is a very valuable component in the development of a technical student. The excitement of taking responsibility for the design and construction of their team's microprocessor project is electrifying. The communication skills necessary to contribute positively to the teams efforts are sharpened. The conscientious manner in which the students work with components that they purchased is a valuable skill indeed. The organizational skills needed to meet the commitments of the submitted timeline are also brought into play. The "real world" opportunities provided in this course attract many graduates of local four-year engineering programs. Many engineering graduates have the theory but are lacking in the practical aspects of engineering. The integration of our technical students and the engineering graduates provides an added bonus to our technician students.

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|---|---|
| **DOMAIN:** | Systems/Work Organization |
| **MODEL:** | Linked: Connecting mechanism for work-based learning |
| **STRATEGY:** | Independent planning and delivery |
| **COLLEGE:** | La Guardia Community College, New York |
| **CONTACT:** | Paul Saladino (718/482-5220) |

### Career Preparation Innovation

La Guardia Community College requires a minimum of two cooperative education experiences for all degrees, with an Integrative Seminar which connects the work-based component with school-based learning. This Integrative Seminar is designed for students with any major, including Liberal Arts.

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## DESCRIPTION (COURSE OUTLINE)

The purpose of this seminar is to enable the student to become an "analytical observer" of his or her internship setting and to demonstrate the role that the team process plays in American culture, both in society and in the workplace. The seminar will also introduce the concept of *Service-Learning*, providing an opportunity for students to reflect upon their community service experience.

### Performance Objectives

- To compare and contrast personal cultural values with those of the internship setting and the broader community.
- To analyze elements of organizational structure.
- To identify leadership styles.
- To identify and evaluate situations involving leadership, decisionmaking, and values at the workplace.
- To identify teamwork experiences and to analyze elements of the group process.
- To interpret different life experiences so as to enrich his or her own perspective.

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## SAMPLE LEARNING ACTIVITY

### Guidelines for the Agency Profile

An Agency Profile will provide an in-depth analysis of the organization you are completing your internship at, and will provide an opportunity for you to critically reflect upon the agency's role in relationship to the community it serves and on your role in the organization. During the final class meeting, you will be asked to present a one minute summary of your internship site which will be videotaped and graded. You might think of it as doing a "TV Commercial" about your agency or organization.

The following format should be followed for the Profile:

- Identify the Mission Statement of the agency.
- Provide a brief description of your agency, including information on clientele, funding, size (# of employees), physical setting, and so on. Provide demographic facts about both clients and employees: age ranges, ethnic diversity, educational backgrounds.
- Critically analyze the topics of this seminar as they relate to your work site, making special note of Values, Culture, Organization, Decisionmaking, Leadership Styles, and Ethical Issues. Use the weekly assignments from the text as a guide.
- Interview one direct service provider at your agency. Choose someone you consider "an agent for social change." Ask about his or her education and preparation for his or her career. Do he or she consider him- or herself to be successful? Do he or she take risks? What type of leadership style best fits him or her? What are some of the problems facing workers in this profession? How important is communication on the job? What impact do he or she make upon the community being served? How do he or she feel about that community? What changes have taken place in the community? How do he or she feel these changes have affected the community?
- Assess the affect of Community Resources (identify strengths and areas of need). This might include an impact analysis of the following resources: Social Service, Housing, Police, Recreation, Education, Employment, Transportation, Health, and Food Services.
- Provide a description of the scope of your responsibilities and your personal role within the organization.
- Reflect upon how your own service experience has changed your perception of the people your agency serves; the professional staff at your organization; and, most importantly, yourself.
- Using the Service-Learning Reader, *Reflections and Perspectives on Service* (NSEE, 1995), which is on reserve in the Library, choose one reading and incorporate your reflection of the reading into your analysis.

- Describe the most valuable thing you learned from your work experience. How has it changed you? What did you learn about you that surprised you? How are you different from when you began? What have you gained and what have you given?

"Knowledge must come through action." (Sophocles)

| | |
|---|---|
| **DOMAIN:** | Foundation Academics/Work Organization |
| **MODEL:** | Linked courses |
| **STRATEGY:** | Joint planning and delivery |
| **COLLEGE:** | Southeastern Community College, Iowa |
| **CONTACT:** | Bonnie H. McDonald (319/752-2731) |

### Career Preparation Innovation

This second semester technical writing course is the connecting mechanism for capstone and internship programs in Mechanical Technology and Computer Programming. The writing activities center around the development and documentation of student projects.

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## DESCRIPTION

### ENG153: Technical Writing II (3 credits)

**Course Objectives:** The student will continue to refine and develop technical writing skills, concentrating on the preparation of at least three major reports; learn the function of the formal report apparatus and specific related correspondence; expand his or her library research skills by learning the specific techniques of note-taking, preparation of a bibliography, and documentation; prepare a proposal for his or her term shop project in Prototype Design and Construction; use correct research procedure through the preparation of a formal analytical report on a technical subject; demonstrate his or her ability to function effectively in a team-writing situation through the preparation of an analytical report (as required); and prepare a comprehensive process description of the design and construction of a term project in Prototype Design and Construction, using data from personal notes, lab reports, and so on, to supply specific details.

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## SAMPLE LEARNING ACTIVITY

### Analytical Report of Term Project/Term Internship

Using the two previous reports (proposal and comparison of products), report in narrative form your term project/term internship experience. The elements are to include Purpose of project/practicum, including supplements of Evaluation Criteria, a Pie Chart showing relative amounts of emphases for project, and Equipment Analysis; Background; Scope, including overview of the Environment, Your Duties and Responsibilities, Required Skills, and Training; Required Projects for Completion; Evaluation Criteria;

Implementation, including Plan of Attack, Schedule, Facility Requirements, and Personnel Responsibilities; and a Conclusion.

Report events as they actually happened. Recognize that in Report #1 you *proposed* an analysis; and in Report #3 you *present* an analysis. You will narrate how you completed this project/internship (all of the items listed under Scope) either chronologically, categorically, or, for a comprehensive, effective presentation, a mixture of the two. Appendix must include a glossary of terms and personnel profiles. Submit the final paper using a letter of transmittal, title page, table of contents. table of figures/illustrations, informative abstract, report text, and appendices/supplements. The letter of transmittal is to include inside address; opening paragraph to include response to request for report; report includes body paragraphs discussing the reason/choice of project, skills utilized, worth and challenges of the project, and highlights of special interest; and concluding paragraphs acknowledges any assistance and/or expertise you received.

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| **DOMAIN:** | Career Exploration |
| **MODEL:** | Infusion |
| **STRATEGY:** | Joint planning and delivery by faculty and counselors |
| **COLLEGE:** | Santa Barbara City College, California |
| **CONTACT:** | Jack Friedlander (805/965-0581) |

## Career Preparation Innovation

Career exploration activities which required use of the Career Center were incorporated into introductory courses across the curriculum.

## DESCRIPTION

### Incorporating Career Development Activities into the Curriculum

The Career Center at Santa Barbara City College offers a full complement of services designed to help students clarify and achieve their career objectives. However, as with most commuter-based institutions, having students take full advantage of Career Center services has proven to be a challenge.

While traditional methods of promoting Career Center services (e.g., student tours of the facility as part of the orientation to college program, career-related workshops, classroom presentations to promote the Career Center, and part-time and full-time job listings at the Center) have contributed to increased use of the Center, they didn't result in a large number of students taking full advantage of its resources. To use the analogy of a library, students may have been encouraged to browse the stacks or check out a book, but they did not learn how to use the facility as a research tool.

In the 1992 Fall Semester, a cross-section of faculty teaching introductory courses across the curriculum, including ESL and basic skills, were asked to consider including assignments in their courses that require students to learn about the career and educational opportunities available to them in their disciplines. As of spring 1994, 29 faculty have incorporated research assignments in their courses requiring students to use Career Center resources. The following assignment, given to students in an Introduction to Business Administration course, is typical of the approach used by other disciplines.

## SAMPLE LEARNING ACTIVITIES

Students in Introduction to Business Administration are required to complete a research project that involves the following four components:

1. Complete a résumé worksheet and have it critiqued and signed off by a member of the Career Center staff.
2. View a videotape in the Career Center library on career opportunities and requirements in their major and/or area of interest. Write a one-to-two-page summary of the video's key points and their implications for the student's educational/career planning decisions.
3. Review the catalogs, located in the Transfer Center, of at least three four-year universities that offer a bachelor's degree in their major field of interest. Provide a photocopy of each program and a one-to-two-page synopsis of the requirements necessary to transfer to each institution and the costs/benefits of earning a bachelor's degree, versus entering the job market full-time after leaving Santa Barbara College.
4. Conduct an on-line search utilizing the EUREKA System to acquire current information on key factors concerning the occupational field the student is interested in entering. Provide a printout of the search and write a one-to-two-page synopsis of the information identified with respect to the following: (1) average compensation; (2) education and/or training required; (3) skills/experience required; and (4) economic outlook affecting one's employment potential after successfully completing the Associate degree, bachelor's degree, or withdrawing before completing a degree. A Career Center staff member is required to sign off on each of the four components of this project. This provides assurance that the student used the appropriate Career and Transfer Center resources and that a career counselor reviewed the student's career-planning materials.

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| **DOMAIN:** | Career Exploration |
| **STRATEGY:** | Placement and Transfer Outcomes Publication |
| **COLLEGE:** | Broome Community College, New York |
| **CONTACT:** | Anne Scott (607/778-5205) |

### Career Preparation Innovation

Annual, public (*in college catalog*) reporting of placement and transfer data

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## DESCRIPTION

### Survey Method

All statistics in this report are based on an 88% return to the follow-up survey and reflect the graduate status as of October 21, 1994. The method of data collection proceeded as follow:

1. Administered at the May 20 graduation rehearsal.
2. Mailed to those not attending the May rehearsal with a June 17 return requested.
3. Phone calls were made during June and July to those who did not respond.
4. Second mailing was sent on July 6 to those who indicated they were working a part-time temporary position, unemployed, or unsure of transfer plans. In addition, a second mailing went to those who reported no information, with an August 3 return requested.
5. Second phone calls were made to those with no information or incomplete information.
6. Data obtained from the above steps was sent to Department Chairpersons asking for information they could add with an October 5 return requested.
7. Statistics were compiled with all data up to October 21, 1994, included.

"NA" refers to information which is "not available" due to insufficient response or a nonexistent program. "Unavailable for employment" includes those who travel, marry and decide not to work, or otherwise prefer not to seek employment at this time.

There were 1,015 degrees awarded at commencement exercises in May. The actual number of graduates was 1,008, as seven graduates received more than one degree. All statistics are based on 1,015, the actual number of degrees awarded to those completing graduation requirements in August 1993, December 1993, and May 1994.

## RESULTS

Ninety percent of the class of 1994 at Broome Community College found employment or transferred for further education, according to the annual survey conducted by the Placement Office.

- 50% were employed leaving an unemployment rate of 7%. Once again, the number of graduates employed part-time increased, continuing a trend that began three years ago.
- For those employed, 87% are working in Broome County or the Southern Tier.
- 40% transferred to four-year colleges or technical schools and 80% of these attended colleges within the State University of New York System. This is the highest percentage since the first statistics were collected with the class of 1975.

*Salary information is based on entry-level salaries in full-time positions directly or indirectly related to area of study.* Second- or third-shift differentials are not included. Additionally, all percentage figures were rounded to the nearest whole number which accounts for total figures between 99 and 101.

## THE ACADEMIC AREAS

**Business** - 251 graduates, 64 employed, 3% unavailable for work, 26% transferred, 7% unemployed. Salary info - $14,579 average, $8,840 to $22,000 range.

**Computer Studies** - 50 graduates, 29% employed, 2% unavailable for work, 49% transferred, 20% unemployed. Salary info - NA.

**Engineering and Technology** - 99 graduates, 34% employed, 1% unavailable for work, 54% transferred, 11% unemployed. Salary info - $15,000 average, $12,000 to $22,818 range.

**Health Sciences** - 175 graduates, 86% employed, 4% unavailable for work, 4% transferred, 6% unemployed. Salary info - $22,872 average, $12,480 to $31,200 range.

**Liberal Arts** - 299 graduates, 22% employed, 12% unavailable for work, 74% transferred, 3% unemployed. Salary info - $12,593 average, $10,400 to $17,472 range.

**Special Career Programs** - 141 graduates, 59% employed, 3% unavailable for work, 26% transferred, 12% unemployed. Salary info - $15,546 average, $10,400 to $17,000 range.

## CURRICULUM

The following is a summary of each curriculum of BCC's six academic areas in which there were graduates last year. Percentages are based on number of graduates responding, not total number.

### BUSINESS

**Accounting** - 55 graduates, 76% employed, 0% unavailable for work, 13% transferred, 11% unemployed. Salary info - $13,541 average, $11,440 to $15,000 range.

**Business Administration** - 47 graduates, 22% employed, 3% unavailable for work, 73% transferred, 3% unemployed. Salary info - NA.

**Entrepreneurship** - 4 graduates, 50% employed, 0% unavailable for work, 50% transferred, 0% unemployed. Salary info - NA.

**Hotel/Restaurant Program** - 14 graduates, 92% employed, 0% unavailable for work, 8% transferred, 0% unemployed. Salary info - $11,041 average, $8,840 to $13,676 range.

**Management** - 18 graduates, 62% employed, 0% unavailable for work, 31% transferred, 6% unemployed. Salary info - NA.

**Marketing and Retail Management** - 24 graduates, 75% employed, 3% unavailable for work, 19% transferred, 3% unemployed. Salary info - NA.

**Marketing Management** - 42 graduates, 75% employed, 3% unavailable for work, 19% transferred, 3% unemployed. Salary info - $15,057 average, $13,780 to $16,000 range.

**Office Technologies (Executive Secretary)** - 13 graduates, 77% employed, 8% unavailable for work, 0% transferred, 15% unemployed. Salary info - $13,205 average, $11,440 to $14,560 range.

**Office Technologies (Word Processing)** - 15 graduates, 64% employed, 21% unavailable for work, 0% transferred, 14% unemployed. Salary info - $14,322 average, $14,144 to $14,500 range.

**Travel and Tourism** - 19 graduates, 69% employed, 6% unavailable for work, 12% transferred, 12% unemployed. Salary info - $18,800 average. $15,600 to $22,000 range.

### COMPUTER STUDIES

**Computer Information Systems** - 10 graduates, 43% employed, 0% unavailable for work, 14% transferred, 43% unemployed. Salary info - NA.

**Computer Science** - 34 graduates, 25% employed, 0% unavailable for work, 64% transferred, 11% unemployed. Salary info - NA.

**Computer Technology** - 6 graduates, 33% employed, 17% available for work, 17% transferred, 33% unemployed. Salary info - NA.

### ENGINEERING AND TECHNOLOGY

**Chemical Engineering Technology** - 17 graduates, 44% employed, 0% unavailable for work, 50% transferred, 6% unemployed. Salary info - NA.

**Civil Engineering Technology** - 18 graduates, 50% employed, 0% unavailable for work, 44% transferred, 6% unemployed. Salary info - $23,206 average. $15,683 to $38,500 range.

**Electrical Engineering Technology** - 23 graduates, 32% employed, 5% unavailable for work, 41% transferred, 23% unemployed. Salary info - $21,710 average, $15,000 to $26,000 range.

**Engineering Science** - 21 graduates, 100% transferred.

**Industrial Technology** - 9 graduates, 71% employed, 0% unavailable for work, 14% transferred, 14% unemployed. Salary info - NA.

**Mechanical Engineering Technology** - 11 graduates, 27% employed, 0% unavailable for work, 54% transferred, 18% unemployed. Salary info - NA.

### HEALTH SCIENCES

**Dental Hygiene** - 19 graduates, 81% employed, 6% unavailable for work, 0% transferred, 12% unemployed. Salary info - $26,500 average. $21,500 to $31,200 range.

**Health Information Technology** - 15 graduates, 79% employed, 14% unavailable for work, 0% transferred, 7% unemployed. Salary info - $18,823 average, $12,480 to $27,000 range.

**Medical Assistant** - 25 graduates, 71% employed, 12% unavailable for work, 0% transferred, 17% unemployed. Salary info - $15,055 average, $14,460 to 16,640 range.

**Medical Laboratory Technology** - 14 graduates, 86% employed, 0% unavailable for work, 7% transferred, 7% unemployed. Salary info - $18,517 average, $16,681 to $19,697 range.

**Nursing** - 71 graduates, 88% employed, 2% unavailable for work, 9% transferred, 2% unemployed. Salary info - $24,828 average, $24,828 average, $20,800 to $27,248 range.

**Physical Therapist Assistant** - 17 graduates, 100% employed. Salary info - $23,605 average, $19,300 to $31,000 range.

**Radiologic Technology** - 14 graduates, 100% employed. Salary info - $21,760 average, $21,008 to $23,920 range.

### LIBERAL ARTS

**Associate in Arts Degree** - 226 graduates, 18% employed, 2% unavailable for work, 79% transferred, 2% unemployed. Salary info - NA.

**Associate in Science Degree** - 2 graduates, 100% transferred.

**Communication and Media Arts** - 32 graduates, 40% employed, 0% unavailable for work, 53% transferred, 7% unemployed. Salary info - NA.

**Mental Health** - 39 graduates, 26% employed, 0% unavailable for work, 66% transferred, 9% unemployed. Salary info - $11,200 average, $10,400 to $12,000 range.

### LIBERAL ARTS RELATED CAREERS

**Criminal Justice** - 55 graduates, 54% employed, 2% unavailable for work, 30% transferred, 14% unemployed. Salary info - $21,433 average, $16,300 to $24,000 range.

**Early Childhood** - 23 graduates, 91% employed, 4% unavailable for work, 0% transferred, 4% unemployed. Salary info - $12,080 average, $10,400 to $15,600 range.

**Fire Protection Technology** - 3 graduates, 33% employed, 0% unavailable for work, 67% transferred, 0% unemployed.

**Individual Studies (AAS)** - 1 graduate, 100% employed. Salary info - NA.

**Individual Studies (AS)** - 24 graduates, 21% employed, 5% unavailable for work, 63% transferred, 10% unemployed. Salary info - NA.

**Paralegal** - 35 graduates, 68% employed, 0% unavailable for work, 14% transferred, 18% unemployed. Salary info - $15,309 average, $12,000 to $17,000 range.

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| **DOMAIN:** | Education for Citizenship |
| **MODEL:** | Hybrid courses required for graduation |
| **STRATEGY:** | Independent planning and delivery |
| **COLLEGE:** | Salt Lake Community College, Utah |
| **CONTACT:** | Elwood Zaugg (801/957-4531) |

### Career Preparation Innovation

When the faculty and administrators redefined general education to be "the integration of attitudes, skills, and broad abstractions of knowledge," a new 5 quarter credit multidisciplinary requirement for graduation was instituted. As a result, a number of courses which blend "knowing" with "doing" have been developed. The samples that follow are for four independent multidisciplinary courses.

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## DESCRIPTIONS (4 COURSES)

### Electricity and Modern Living

**Topics:** Electrical codes and consumer safety; electrons/Ohm's Law; series, parallel, and combination circuits; electric energy and power; batteries; generation of EMF

**Lab activities:** Wire: series circuits using LEDs; residential lighting circuit and change it for a fluorescent fixture and remote control switch; operate using a plug-in controller, then demonstrate using a wireless controller; residential lighting circuit; replace a single-pole switch with a single pole dimmer switch; parallel circuits and combination circuits (e.g., Ni-Cad battery charger that plugs into a car lighter, includes use of LED); replace a lighting/receptacle circuit with a GFCI that feeds another receptacle; 3-way lighting circuit, then add a 4-way switch; door bell circuit; consumer electrical safety inspection.

**Research topics:** Aspect of power generation or consumption; power process and its advantages and disadvantages; trade-offs and practicalities; Electrical frontiers—inventor or pioneer in electrical history.

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## ENRICHING OUR LIVING: ENRICHING OUR LIVES

### Text

*Working in America* by Robert Sessions and Jack Wortman, Notre Dame Press.

### Content

- Focus on work, individual enrichments, and community involvement. Panel discussion with faculty from a variety of disciplines on their views on the role of work in their lives, how they bring creativity to their work, and how they enrich their lives outside their work.
- Ambivalent feelings about work
- Materialism and spiritual values
- Humans as commodities
- Alienation and integration: How do we minimize the former and maximize the latter?
- Work prior to industrialization
- Conceptual foundations of modern work
- The future of working in America
- Vision of work from other cultures
- Good work in the modern world

## Business 105: Business and Society

### Text

"An Indian's View of Indian Affairs" by Chief Joseph. In *Hartwick Classic Leadership Cases*. (1994). Oneonta, NY: Hartwick Humanities in Management Institute, Hartwick College.

### Content

- Business and Socioeconomics: Social and Cultural Development; Economic Development; International Trade and Business Development
  - The goal for this section is to understand the basic philosophy of business by tracing the history of capitalism and free market enterprise.
- Business and the Human Factor: Organizational Structure and Change; Management Theory; Leadership and Excellence; Motivation
  - The goal for this section is to examine the relationship of the worker to the workplace by discussing the evolvement of corporations in capitalistic and free market systems and determining the qualities necessary for companies and small businesses to remain successful in a global economy.

- The goal for this section is to study the behavior of companies in a capitalistic environment by examining their responsibility to their employees, the communities in which they operate, and the consumers who buy their products.

**Sample Learning Activity: Business History/Future Plans Project**

As a group, you are to pick a locally represented business, community, or geographic region and study both its history and future plans. The object of the project is to find out how the following elements affected the success or failure of the business or community and how those elements will impact the business or community in the future.

- Economic Environment: Under what economic conditions was the company started? How and why did the business or community change as economic conditions changed? How is it planning to deal with future economic trends?

- Social/Cultural Environment: What issues surrounding customs, traditions, social class, and hierarchy affected the company's/community's development? How will these issues affect the company/community in the future?

- Political/Legal Environment: What local political and legal issues affect it? How have/will these issues impact its operation and help form its policy?

As you find out more about your company or community, you will realize one of these elements typically has greater impact than the others. You may want to analyze why that is and see if there is consistency between historical and projected management actions in response to these environments. Other considerations might involve the uniqueness of the company or community as well as any common threads which seem to recur in all environments examined.

**Technology and Society**

**Content:** Sources of technological change; diffusion of technology; technology and the environment; work in pre-industrial and industrial societies; technology and jobs; printing; the electronic media; tools of destruction; shaping and control of technology; technology of the future

**Sample Learning Activity: Research**

Explore new developments in technology in your field of study or interest—how has technology changed the skills required for your chosen occupation?

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| **DOMAIN:** | Education for Citizenship |
| **MODEL:** | Hybrid course |
| **STRATEGY:** | Joint planning; independent delivery |
| **COLLEGE:** | Technical College of the Lowcountry, South Carolina |
| **CONTACT:** | Lucille Roth (803/525-8257) |

### Career Preparation Innovation

Technology and Culture: This course examines the impact of technology and the future of technology on cultural values, society, and the individual.

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## DESCRIPTION

The Technology and Culture course was developed during the summer of 1991 by the entire faculty, that is, the humanities instructors as well as the technology instructors. Both groups worked together, each offering valuable insight and expertise. As with many community colleges, the perception is often that of one physical campus but two very different student bodies with little in common. Thus, it became the faculty's task to develop a course that would connect and explain the relationship between technology and humanities. The challenge was to develop a course that could attract both humanities and technology students. And finally, once inside the classroom, students would learn to understand the intricate interdependence of technology and culture. This course not only added a humanities course to the curriculum, but it also has become a vital bridge course between technology and humanities. Through good advising and the inclusion of the course into the curriculum as an elective, many Technology and Occupational program students are now taking this course along with the AA/AS students. An added benefit is that students are finding that their perspectives are complementary.

### Emphasis

The impact and use of technology is shaped by cultural traditions and values; The issues technology addresses are an integral part of the reasons for and meaning of societal and cultural change; The ramifications of adopting a technology are usually far wider than the immediate perspective such as (1) that technology accelerates change within society resulting in consequent dislocation, social anomie, and uncertainty for people, along with its promise of progress and adaptation; (2) that a major consequence of technological change is an institution with perceived loss of control; (3) that the benefits of technology are differential and unequal, producing more evident social and economic differentiation.

## Topics

- Communication: How did language develop? How does language influence culture? What is the impact of TV on society? Does TV determine values of society or vice versa?
  Nixon/Kennedy debates; the telephone and our lives (cellular telephones); do we need a national language?; importance of global communications; diaries and letter writing—knowledge of history
- Transportation: What changes came about as a result of the development of mass transit? How did the development of the automobile affect mass transportation? family units? sexual mores? economy? other cultures? drinking and driving? radar detectors? federal intervention? seat belts?
- Health: What is life? What is death? How has technology affected those definitions? What moral issues are brought about by technology? What is society's role in maintaining health/life? How do we set priorities for spending health dollars? diseases as punishment; view of cigarettes; economic aspects of health care; sexuality and technology; research on fetal tissue; genocide - sterilization; government control; ethical choices; population - PILL; AIDS; right to die; public vs. personal responsibility; genetic engineering; new medicines - drugs; needs of public vs. interests of corporations; illegal drugs; reproductive rights; mother's responsibility; lifestyle
- Environment: Why preserve our animal and plant life? What are the myths of conservationism? What preservation measures should be taken in the Lowcountry area? Which is more important—development or preservation? energy policy; when work environment destroys health; latent dangers of new energy sources; ozone layer; Victoria Bluff/industry; TEDs; acid rain; Savannah River Plant; recycling; beach renourishment; industry vs. wildlife (endangered species); wastewater/waste handling; landfills; public lands/wetlands; chemicals on foods; dependence on animal food/link with cancer; nuclear power vs. coal; sustainable development

**DOMAIN:** Education for Citizenship
**MODEL:** Hybrid course
**STRATEGY:** Joint development; independent delivery
**COLLEGE:** Pennsylvania College of Technology
**CONTACT:** Daniel J. Doyle (717/326-3761, ext. 7749; e-mail: ddoyle@pct.edu)

### Career Preparation Innovation

Using a variety of materials, this course introduces the philosophical, social, and economic aspects of a "work ethic" and technological change.

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## DESCRIPTION

### History 262: Technology and Society (Writing Enriched Course):

### Course Competencies:

By the end of the course, students will synthesize and evaluate the background and influences of modern technological change; the relationship of technology to labor and the values associated with labor; the relationships of ideology, technology, and economic and social values to changes in expectations relating to the "work ethic"; the transformation of the social class structure associated with increased use of technology; the implications of technology for gender; the immigrant and the African American; the distinctions and relationships of science and technology; the de-skilling of work; the concept of system and the impact of its introduction into work and home life, especially through "scientific management"; the systematization of power, communications, and the power to communicate; the systematization of the physical environment and leisure; technology and warfare; technology as a social question; technology and ideology; technology and ethical issues; development of standardization and its implications; development of automation and its implications of control; technology and electronic communication, including aspects of propaganda; technology and globalism, including imperialism; the concepts of appropriate technology and technology transfer.

### Course Content:

- Technology and Society—varying perspectives
- Early perspectives on nature and technology—Protestant values; work and capitalism; views of nature—"machine in the garden"; resources—natural and human

- Transforming Society: Manufacturing America 1607 to 1800; young America and individual opportunity 1800-1830s; America as a social unit: the 1830s-1870s
- Systematizing America, 1870s to 1920s—Systematizing power; communications and the power to communicate; systematizing the fabric of American life: the 1870s to 1920s; systematizing workers and the workplace
- From Industrial America to Postindustrial America: 1920s to present—Technology as a social solution in the 1920s-1950s; technology as a social question, 1950s to present;
- Assessing Technological Change and the Future—Predictions—hype or reason? recognizing and evaluating dilemmas; thinking historically

**Texts**

Ruth Schwartz Cowan. (1983). *More Work for Mother.*

Daniel J. Doyle. (1993). *British Industrial Revolution* (computer-aided tutorial).

James Flink, *Car Culture* (handout)

David Hounshell, *From the American System to Mass Production* (handout)

Alan Marcus and Howard Segal. (1989). *Technology in America.*

Daniel Rodgers, *The Work Ethic in Industrial America*, Chapter 1 (handout)

Frederick Taylor (from on-line library at Stevens Institute of Technology)

Albert H. Teich. (1993). *Technology and the future* (6th ed.).

E. P. Thompson, *Time, Work-Discipline and Industrial Capitalism* (handout)

Max Weber, *The Protestant Ethic and the Spirit of Capitalism*, Chapter 1

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| **DOMAIN:** | Education for Citizenship |
| **MODEL:** | Hybrid course |
| **STRATEGY:** | Independent planning and delivery |
| **COLLEGE:** | Sinclair Community College, Ohio |
| **CONTACT:** | William Deighton (513/449-5128) |

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## DESCRIPTION

### Connecting Technology and Our Lives

Focus on the history, underlying concepts, and the effect on community values and quality of life resulting from technological development in the Dayton area.

### Text

*Technology in America: A Brief History* by Marcus and Segal

### Objectives

Develop in career-oriented students an appreciation for the humanities and the virtue of applying unbiased approaches to the solution of problems that incorporate technical components. To that end, students will be encouraged to evaluate their own views for too narrow a focus and appreciate the point of view of others with divergent opinions. More specifically, students successfully completing the course should be able to identify major components of technology in Dayton, with a view to the past, present, and future; write a clear historical synopsis of technological development in Dayton; evaluate the personal impact of these developments with a focus on community values and quality of life; establish, argue, and defend a position concerning the benefits and disadvantages of local technological development; create a personal plan to maximize quality of life based on predictions of short-term trends in local development.

### Topics

Value of humanities courses for career-oriented students; fundamental concepts underlying the interaction of technology and people's lives; history and impact of automated processes and technophobia; invention of pull tab and pop-top cans; electronic banking; automotive safety systems; technology and public safety; local water supply; sewage and trash disposal; and Dayton's great flood and the community's response

**Sample Learning Activities**

- Compare the growing influence of electronic banking on rich and poor people.
- Technological change can be driven by economic or social forces. For about fifteen years, in the 1820s and '30s, the Lowell Mills combined both. Who where the primary workers in the mills? The owners of the mills believed that mental discipline and moral character were fundamental for personal success. Explain some of the ways the mill system attempted to develop discipline and character in the workers. Eventually the mills closed due to economic failures. Was the social experiment a success? Illustrate your answer with specific examples.
- In class, we discussed ten basic concepts associated with technological development and its effect on society. Select any three concepts and state them in your own words. Then link them to your personal life with examples of how they affect you or your family. Technological change can be viewed from an optimistic, pessimistic, or neutral point of view. Based on the examples you have selected in the first part of your answer, how would you characterize your view of technological change?
- Explain three examples of how technological change has affected emergency service workers. What factors other than actual demonstrated need may influence the adoption of new technology by the public safety sector? How is technological change in the public safety sector funded? Is this method of funding regressive or progressive?

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| **DOMAIN:** | Job Specific/Education for Citizenship |
| **MODEL:** | Linked occupational and academic courses |
| **STRATEGY:** | Joint planning and delivery |
| **COLLEGE:** | San Diego City College, California |
| **Contact:** | Sally Deaton, Accounting (619/295-0735)<br>William R. Stewart, Philosophy (619/230-2602) |

## Career Preparation Innovation

Occupational (Accounting) and academic (Philosophy) courses are linked through instruction and in assessment.

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## DESCRIPTION

### City Block – Accounting 102 and Philosophy 102B

The purpose of this City Block combination, Accounting 102 and Philosophy 102B, is to promote writing, critical thinking, and technology across the curriculum by integrating the oral and written discussion of business ethics with a practical and philosophical understanding of accounting. Accounting is the very heartbeat of business, and the information systems accounting generates are the arteries, pathways, or options that decisionmakers will choose. Ethics is the conscience of the businessmaking process. Ethics must weigh short-term profit expectations of owners against community dreams, employee needs, the marketability of products, the usefulness of those products to consumers, environmental integrity, and global responsibility constrained by national interests.

As you learn the accounting process in Accounting 102, you will be discussing the ethical implications to business in Philosophy 102B. Our tests are joint tests. That is to say that the Ethics course will have questions on Accounting tests, and Accounting will have questions on Ethics tests. This is not to suggest a simple question location issue. Ethics questions will directly address the sorts of ethical issues which arise in relationship to the material that is being covered in Accounting. For example, if the Accounting instructor is addressing the issue of complete disclosure, the Ethics instructor will pose ethical circumstances related to issues of complete disclosure and ask students to give an ethical analysis of the situation and suggest ethical alternatives. Each test will be worth 200 points: 100 points for Accounting and 100 points for Philosophy.

Students will be required to engage in two separate forms of research in this course. The first form is the more traditional: library research where students will be asked to identify ethics issues in business on the local, national, and international levels. The second form of research will involve students going out into their local business community and interviewing businesspeople to inquire about ethical issues they have faced in their personal business experiences. By pursuing this latter form of inquiry, I hope students will find that ethics is far from an arcane academic field, but one which immediately and directly impacts their vocational field.

**Sample Learning Activity**

You are the supervisor of a property management firm and you discover that an employee is utilizing funds from one entity to cover billings for another. She explains that her reason for doing this is to simply temporarily cover bills which otherwise would be billed as late and a fee would be assessed. She assures you that she reimburses those funds later in the month plus interest to the appropriate party. In this way, she points out, the entity with the chronically low beginning monthly balance saves money because the late fees are greater than the interest she assesses, and the second entity ends up with a higher adjusted balance each month. She points out that this way everyone wins. Billing agencies receive their funds on time, the low funds entity avoids additional fee burdens, and the high funds entity receives additional funds that it would not otherwise realize.

1. Identify the fraudulent accounting practices of this employee.
2. What would Mill, Kant, and a philosopher of your choice have to say to this employee?

**DOMAIN:** Job Specific/Education for Citizenship
**MODEL:** Linked courses
**STRATEGY:** Joint planning and delivery
**COLLEGE:** Allan Hancock Community College, California
**CONTACT:** Kay Orrell (805/922-6966)
Marie Estrada, Business; Daniel Witmer, Psychology

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## DESCRIPTION (COURSE OUTLINE)

### Psychology (101) linked with Human Relations in Business (107)

In linking Psychology with Business, there has been an effort made during Spring semester 1996 to show the practical applications of the theories of Psychology concerning perception, cognition, motivation, learning and reinforcement, and personality/motivation theories to the real world of business. This includes how employees behave in the workplace, how management relates to employees, how organizations relate to their customers, and how, in the end, Business employs the strategies of Psychology in the real world (Applied Learning) as opposed to laboratory/experimental inquiry (Research Learning).

### Sample Learning Activities

- Compare the psychological theory of reinforcement using secondary reinforcers with the Business 107 text's specific section on "Rewarding Individual & Team Performance and Incentive Programs" (pp. 268-271). Which type of incentives listed in the Business text would work best?
- Using what you have learned about the need for stimulation by adults/peers/family for young children, compare "Sesame Street" to the "Mighty Morphin Power Rangers." What images and what inputs do these shows make on preschool children?
- You are the Vice President of Personnel for a manufacturing firm. Your company makes widgets for stereo systems. Your business is expanding and your plant is being asked to add a 3rd shift—11 p.m. to 7 a.m.—to the current two shifts. You will need to hire new employees. You cannot put all new employees on the new shift. Using the information you know about Circadian Rhythms, what kind of plan would you set up to run a three-shift employee force? Be sure to explore all the

potential problems of employee performance, morale, production efficiency, and the impact of shift work on a person's health and sleep habits.

- You are the Director of Marketing for a TV advertising company. You help companies make commercials. Think of ways you could develop commercials that will focus the audience on the visual aspects of whatever product you wish to sell. Design an ad that would make use of the principle of closure, and consider applying the techniques of figure and group or similarity and proximity in the ad.

**STRATEGY:** Cross-division administrative collaboration
**COLLEGE:** Macomb Community College, Michigan
**CONTACT:** James Jacobs (810/286-2119)

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## DESCRIPTION

**A Mission Manager at Macomb Community College is expected to do the following:**

- Become the college's resident expert on a particular aspect of the institution's mission: maintain familiarity with the literature, research, technology, and body of expert opinion related to that mission component.

- Represent MCC at local, state, and national events: scan and maintain database related to mission (i.e., ERIC); subscribe to selected publications; establish networks with groups and individuals within the institution, business, industry, and related organizations; maintain memberships and play an active role in professional organizations; and attend appropriate inservices/workshops/conferences.

- Become a visible champion for advancing that particular mission focus both inside and outside of the institution: create and communicate the vision for the future of that mission element; be able to call upon a network of professional and community contacts related to that mission; and prepare position papers to support mission and disseminate to college community.

- Communicate mission vision, goals, and activities internally and externally: assume leadership role and act as agent for change both internally and externally; maintain memberships and play an active role in professional organizations; represent college to appropriate community organizations, businesses, educational institutions, and so on; take strategic risks to achieve mission goals; and publish appropriate articles related to college mission.

- Provide both strategic and operational leadership for that mission area: become conversant with internal strengths and weaknesses as well as external opportunities and threats regarding that mission; formulate, communicate, and assist in resolving key "make-or-break" issues relating to that aspect of mission.

- Become knowledgeable about other college missions and how they relate to each other: employ a holistic perspective; attend workshops and seminars related to problem solving/conflict resolution; practice conflict resolution; develop strategic alliances for collaborative function and win-win solutions; practice collaborative techniques in mission management/leadership; develop strategic plan in including appropriate assessments; present diverse scenarios for problem-solving process; and understand the political and cultural climate of the institution.

- Provide a means for assessing effectiveness in achieving that mission component: initiate action for enhancing mission effectiveness; assure consistent application of institutional policies and practices; clear assessment measurement for expected outcomes must be identified prior to taking any action; refine strategic plan based on assessment feedback on an ongoing basis; and assess results of specific professional staff development and relate to mission achievement.

- Practice and nurture strategic thinking with regard to the future of that mission element: utilize the *Strategic Guidance Handbook and Model*, the *Program Review Recommendations*, and the *Framework for Fundamental Change* as guides in formulating strategic and operational plans; read and review *Strategic Guidance Handbook and Model*, the *Program Review Recommendations*, and the *Framework for Fundamental Change* as guides in formulating strategic and operational plans; and practice a variety of strategic thinking models/processes.

- Provide face-to-face leadership in mobilizing and developing staff who are working in support of the mission component: assure a high level of staff understanding, currency, and commitment with respect to that mission; share information and educate staff as to the mission, goals, strategies, and assessment outcomes; develop/identify appropriate professional staff development activities for all employees; develop specific communication processes; develop specific mentoring activities for all staff.

- Participate in selected, broad-based institutional advancement efforts: serve on appropriate college committees; collaborate with service managers and mission managers; research and identify specific funding opportunities; collaborate on plans to acquire necessary resources; develop appropriate partnerships; be informed and supportive of all other missions through active participation—that is, mission managers' meetings, sharing resources; seek opportunities for personal growth and development; and maintain currency through workshops, inservices, literature, conferences, and so on, regarding the mission.

**STRATEGY:** Implementation led by faculty leaders
**COLLEGE:** New Hampshire Technical Institute
**CONTACT:** Jeff Rafn (603/271-2722)

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## DESCRIPTION

Statewide faculty leaders who are to design and implement innovations are titled "System Fellows."

### Purpose

The purpose of the System Fellows Program is to assist the Department of Postsecondary Technical Education in meeting the mandate of its mission to provide the highest possible level of technical, academic, and professional preparation of students and employers. It provides faculty and staff with the opportunity to develop expertise in areas necessary for the growth and responsiveness of our institutional and System services, curricula, and programs. It is expected that the System Fellows will become cognizant of regional and national developments and trends in all aspects relating to their assigned project and that this information will be disseminated throughout the colleges/institute.

### Responsibilities

- Under the System Fellows Program, faculty or staff are appointed for a semester, academic year, or calendar year to focus on a designated area of research and study with specific outcomes to be achieved. Fellows will be released from their regular responsibilities in order to accomplish the assigned project. The Commissioner will provide funds to enable the college to cover the necessary duties and responsibilities during the term of the Fellow.
- Project areas for the System Fellows will be the priorities established by the Board of Governors, Commissioner, and Administrative Board. Projects must have applicability to all of the institutions in the System.
- Appointments are made by Commissioner after consultation with Presidents. Appointments may not be consecutive.
- Whenever possible, no more than one System Fellow will be assigned from a campus.
- To be eligible for an appointment as a Fellow, faculty or staff must have completed two years in the System.

- Fellows must present for approval to the Commissioner, within the first 30 days of their appointment, a detailed plan of action with specific outcome objectives. The final plan of action will be published and made available for review.
- Fellows will report to the Commissioner or his or her designee for the duration of the project.
- Fellows will work with the appropriate committees and Presidential Portfolio designee whose responsibilities for oversight and implementation include the assigned project area and the ad hoc committees and initiatives already underway in the designated project areas.
- During the course of the project, Fellows will visit each institution and work with the appropriate faculty and staff necessary to achieve the outcomes established for each project.
- In addition to the released time, Fellows will be provided with funds for staff development, travel, and resources.
- System Fellows will present the results of their project at the annual Fall Symposium or other scheduled staff development program.
- The college/institute from which the System Fellow comes will continue to provide an office and the secretarial support normally made available to that person.

Approved by the Administrative Board on October 5, 1992.

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| **STRATEGY:** | Educator-in-the-Workplace |
| **COLLEGE:** | Pasco Hernando Community College, Florida |
| **CONTACT:** | Carmen Bell (813/847-2727, ext. 3264) |

### Career Preparation Innovation

Faculty and administrators visit and job shadow in local workplaces to learn how academic skills are applied in everyday practice.

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## DESCRIPTION

Educators in the Workplace offers faculty, counselors, and administrators an opportunity to gain experiences that will enable them to develop and revise curricula and counseling services so that they are relevant to the real world.

### Program Objectives

To provide educators with a current and first-hand knowledge of workplaces in order to better serve their students' personal, academic, and career development, specifically career options and local job opportunities, including

- educational and skill requirements.
- the impact of technology on the changing labor market.
- educational and training programs offered in the workplace.
- effective methods and techniques used in the workplace which will assist students in their career development and job placement.
- the special career development needs of the physically challenged, minorities, and women.

### Program Elements

- Educators visit a series of workplaces representing a diversity of businesses, industries, and governmental offices.
- Each workplace provides a tour and information on technology, careers, range of positions, education and skill requirements, training, products, services, processes, communications systems, history, and so on.
- During the program, each educator selects a job shadowing experience for a more in-depth view of the workplace environment.

- Participants attend a debriefing session to discuss their experiences. Instructors also share what they have learned and how they can apply that knowledge and experience to their daily curriculum and career counseling.

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| **STRATEGY:** | Educator-in-the-Workplace |
| **COLLEGE:** | University of California at San Diego, and<br>San Diego County School-to-Career Partnership |
| **CONTACT:** | Mary L. Walshok or Barbara Edward (619/544-2990) |

**Career Preparation Innovation**

Educator in the Workplace sponsored by a four-year university

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## DESCRIPTION

A four-year university convenes a two-week summer institute for community college faculty and administrators that encompasses local labor market information, job shadowing, workshop on integrating career preparation into the entire curriculum, assessment, crosscultural educational practices, and becoming a change agent, and also offers graduate credit and a small stipend.

### Employer Guidelines for Teacher Job Shadow Program

What is a job shadow? A job shadow is an opportunity for educators to spend time with one or more employees at a business, nonprofit organization. or government agency to observe and experience how business and industry function.

**Goals for Business:** The goal of the job shadow experience is to allow business to provide input to the educational system, and to invite business to continue to work collaboratively with schools. By allowing an educator to shadow an employee in the work environment, employers will have a first-hand opportunity to identify and discuss the skills needed for the job.

**Goals for Educators:** The goal of the job shadow experience is to enhance the educator's teaching strategies so that their existing curriculum can be infused with work-relevant skills. As a result of the experience, educators can better communicate to their students the connection between schoolwork and their future careers.

**Guidelines for Employers:** Perform normal work activities and be willing to describe the skills needed for those activities; be willing to talk to the educator about your work and its significance to the organization; and allow the teacher to observe and/or participate in projects, meetings, and other work processes that may help them understand the scope or complexity of the job.

**Guidelines for Educators:** Call the employer to confirm appointment and job shadow schedule; observe the employer in action and ask appropriate questions; participate in selected projects if requested by the employer; and observe the level of skill proficiency, foundation skills, SCANS skills, specialized knowledge, employee interaction (both structured and informal), process for evaluating employee productivity, use of technology, types of communication, and the interdependence of departments or systems within the business.

**Sample Questions for Educators To Ask at the Work Site:** What personal traits do you want in someone who works with you or for you? What are the "tools of your trade"? How has technology changed your work or workplace in the last few years? What kinds of materials do you read in your job? Do you write reports, letters, or articles at work? What kind of mathematics do you use in your work? How important is listening to other people's ideas, complaints, or directions? Do you have to speak in public or at meetings? What kinds of advancement opportunities are available? Describe a problem/task you encountered and how you solved it; Do you work alone or as part of a team? Who directs your work? Do you have the chance to create or design something as part of your job? Describe a typical day at your job; Describe the types of decisions you have to make in your job; If a client or customer makes you mad, how do you handle the situation? How important is "good customer service" in your workplace?

## List of Contact Persons [N] for Volume I

| Institution | Name of Individual | Phone |
|---|---|---|
| Alan Hancock Community College – CA | Kay Orrell | 805/922-6966 |
| Broome Community College – NY | Pat Durfee/Ann Sova | 607/778-5363 |
| Kapiolani Community College – HI | Leon Richards | 808/734-9565 |
| Prince George's Community College – MD | Margaret Ross | 301/336-6000 |
| Mt. Hood Community College – OR | Cathy Curtis | 503/667-7396 |
| Solano Community College – CA | Nan Wischner | 707-864-7000 |
| San Diego City College – CA | Candy Waltz/Larry Forman | 619/230-2512 |
| Dutchess Community College – NY | Judy Tavel | 914/471-4500 |
| Community College of Denver – CO | Diane Cyr | 303/556-2600 |
| SUNY – Delhi – NY | Kevin Hodne | 607/746-4159 |
| Ohlone College – CA | Mikelyn Stacey | 510/659-6155 |
| Chattahoochee Technical Institute – GA | Fred Holmes | 912/681-5500 |
| George Wallace Community College – AL | Ken Roberts | 334/875-2634 |
| Mississippi Gulf Coast Community College | Dean Belton | 601/928-6397 |
| Boise College of Technology – ID | Sharon Cook | 208/385-3015 |
| Broome Community College – NY | Penny Corino | 607/778-5415 |
| Pulaski Community College – AR | Harriet Frazer | 501/771-1000 |
| Peninsula Community College – WA | Jim Walton/Grace LaFerney | 360/452-9277 |
| Orange Coast Community College – CA | George Blanc | 714/432-5916 |

| Institution | Name of Individual | Phone |
|---|---|---|
| Monterey Peninsula Community College – CA | Vince Bradley | 408/646-4039 |
| Dona Ana College – NM | Cecelia Cervantes | 505/527-7520 |
| Southern Arkansas Technical – AR | Gary Oden | 501/574-4500 |
| Vermont Technical College – VT | Bruce Gordon | 802/728-1390 |
| University Community College – OH | Leo Krzywkowski | 501/556-2220 |
| Mass Bay Community College – MA | Jonathan Guevera | 617/237-1100 |
| Mt. San Antonio Community College – CA | Barbara Crane | 909/594-5611 |
| Guilford Tech Community College – NC | Sylvester McKay | 919/454-2510 |
| Washtenaw Community College – MI | Pat Cygnar | 313/973-3374 |
| Elizabethtown Community College – KY | Ty Handy | 502/769-2371 |
| Butte Community College – CA | Larry Newman | 916/895-2454 |
| Community College of Denver – CO | Diane Cyr | 303/556-2600 |
| Waukesha Community Technical College – WI | Laurence Schoenberger | 414/691-5566 |
| El Paso Community College – TX | Robert Starke | 915/594-2150 |
| Richland Community College – IL | Stuart Shepherd | 218/875-7211 |
| San Jacinto Community College – TX | Beryl McKinnernry | 713/998-6182 |
| George Wallace Community College – AL | Ken Roberts | 334/875-2634 |
| La Guardia Community College – NY | Diane Ducat/Cathy Sullivan | 718/482-5204 |
| Penn Valley Community College – MO | Deborah Mann | 816/759-4027 |
| Mt. San Antonio Community College – CA | Barbara Crane | 909/594-5611 |

| Institution | Name of Individual | Phone |
|---|---|---|
| Los Angeles Trade Technical – CA | Sharon Tate | 213/744-9004 |
| St. Louis Community College – MO | Pat Donahue/Marcia Pfeiffer | 314/644-9942 |
| Salt Lake Community College – UT | Elwood Zaugg | 801/957-4111 |
| San Diego City College – CA | Myles Clowers/Larry Forman | 619/230-2000 |
| Los Angeles Trade Technical – CA | Sharon Tate | 213/744-9004 |
| County College of Morris – NJ | Bonnie Murphy | 201/328-5086 |
| Cypress Community College – CA | Pat Stanley | 714/826-2220 |
| Salt Lake Community College – UT | Elwood Zaugg | 801/957-4111 |
| Cape Cod Community College – MA | Carol Dubay | 508/362-2131 |
| Community College of Marin – CA | Sandy Boyd | 415/883-2211 |
| Washtenaw Community College – MI | Pat Cygnar | 313/973-3300 |
| Indian River Community College – FL | Courtney Voehl/Ray Isenburg | 561/462-4700 |
| Illinois Central Community College – IL | Anne Norton | 309/694-5799 |
| Mississippi Gulf Community College – MS | Dean Belton | 601/928-6397 |
| Fayetteville Technical College – AK | Steve Wagonners | 910/678-8400 |
| Linn-Benton Community College – OR | Patsy Chester | 541/917-4201 |
| New Hampshire Technical – Nashua, NH | Charles Oglesby | 603/882-6923 |
| DeAnza Community College – CA | Mick Sullivan | 408/864-8605 |

## REFERENCES

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Winterbottom, W. L. (1993, January). Innovations in the classroom: Case studies/ Cooperative learning. *Connecticut Community Technical Colleges Center for Teaching Newsline*, *7*(3).